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INTERORGANIZATIONAL LINKAGES AND THEIR EFFECTIVENESS IN THE OPERATION OF PROVINCIAL HIGH SCHOOLS IN PAPUA NEW GUINEA

by

API CAZALY MAHA

©

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled INTERORGANIZATIONAL LINKAGES AND THEIR EFFECTIVENESS IN THE OPERATION OF PROVINCIAL HIGH SCHOOLS IN PAPUA NEW GUINEA submitted by API CAZALY MAHA in partial fulfillment of the requirements for the degree of DOCTOR OF PHILOSOPHY in EDUCATIONAL ADMINISTRATION.

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DEDICATION

To the glory of God

and

in loving memory of my late parents,

Maha Geno

and

Maria Pokana

who, with vision and wisdom, recognized the value of education which began the long road to this learning experience. Their love and hope for me to succeed in schooling was such that I too wanted to learn.

ABSTRACT

This study investigated the interorganizational linkages among the National Department of Education (NDOE), the Teaching Service Commission (TSC), and the Provincial Divisions of Education (PDEs) and their effectiveness with regard to the operation of provincial high schools in Papua New Guinea. Because interorganizational relationships (IORs) are characterized by tremendous variety, pervasive change, and conflict, the qualitative research methodology was adopted for analyzing the unique characteristics of IORs in this particular setting. Interviews, document analysis, participant observation, and journal notes served as data sources. A framework consisting of five dimensions -- contextual, structural, procedural, conflict and conflict resolution, and effectiveness of interorganizational linkages -- guided the data collection and analysis.

The study revealed that the interorganizational linkages were a result of national legislation that created the TSC and the PDEs to assume some of the educational functions of the NDOE. Consequently, interdependence among these organizations was inevitable. There was no overarching unit that had the sole responsibility for coordinating the activities of the member organizations. Also, boundary spanning activities usually occurred at various levels in the respective organizations.

The formally legislated and mandated roles and functions were generally respected by the member organizations. However, these structural arrangements were insufficient to ensure effective relationships. Informal and nonformal relationships, collaborative leadership, and knowledge and understanding of the devolution of educational functions contributed to effective interorganizational linkages.

There was little physical resource exchange among the organizations. Human resources, however, flowed typically from the NDOE and the TSC to the PDEs. Information flow was regular and two way between some pairs and irregular between other pairs.

Interorganizational conflict and conflict resolution were perceived and accepted by the participants as inevitable outcomes of the "professional interaction" among personnel in these organizations. The perceived effectiveness of interorganizational linkages varied from "just satisfactory" to "very satisfactory." These perceptions were influenced by the interpersonal relationships between individuals from the participating organizations.

Contributions of the study include the significance of nonformal relationships in compensating for weaknesses in existing formal linkages, the efficacy of written communication in resolving interorganizational conflict, and the role of collaborative leadership in enhancing interorganizational linkages.

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The production of this thesis is a conclusion of a long journey in which many people provided invaluable assistance. It is my pleasure to acknowledge them. I acknowledge the contributions of my late godparents, Karona Raula and Ravu Walo, who treated me as if I were their own. I also acknowledge the contributions of my eldest brother Rova Maha and his wife Udia Maha.

During the writing of this thesis Professor E. W. Ratsoy, my supervisor, provided wise counsel and professional advice. His interest in my personal success inspired me throughout the course of this study.

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I am forever indebted to my wife Nasain for her love and support in every way to ensure the success of this study, and to my children Karo, Alexander, and Ellie-Jane whose lives were disrupted in order for me to obtain this honor.

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CHAPTER 1

INTRODUCTION TO THE STUDY

Educational organizations, like other organizations, exist within an environment in which their members interact with others both in their organization and in related organizations. Interorganizational linkages exist for several reasons. For example, organizations that are involved in similar interests establish interorganizational linkages to seek and to maintain some kind of support that will facilitate their efforts in achieving their differing but similar objectives. Van de Ven and Ferry (1980) contended that interorganizational linkages may be established under a number of situational factors: resource dependence; response to a problem, opportunity, or mandate; awareness; domain similarity; and size. According to Marrett (1971), these linkages can either be characterized by a low degree of formalization, standardization, and intensity; or they can be characterized by highly formalized, standardized, and intense situations. Similarly, Van de Ven and Ferry (1980) suggested that these relationships can be classified in dichotomies: mediated versus ad hoc or unmediated arrangements; federated versus corporate structures; or as unitary, federative, coalitional, and social choice interagency networks.

In Papua New Guinea (PNG) the operation of provincial high schools (Grades 7 through 10) is a shared function between the National and the Provincial Governments. Under the provisions of the Education Acts of 1970 and 1983, hereafter referred to as the "Education Act," the National Government is responsible for approving the national education plan for the development of the National Education System (NES); providing financial support for the approved educational plan; advising the Provincial Governments on any matters affecting the NES, the efficiency of the schools, or the welfare of teachers; establishing the criteria for the selection of students to attend provincial high schools; and hearing and determining appeals from educational authorities. It is also responsible for the following: approving and implementing the provincial high school curriculum, determining the qualifications and standards required for registration or provisional registration of teachers for provincial high schools, inspecting all provincial high schools, certifying and assessing all teachers, and granting certificates to students and teachers in provincial high schools within the NES. The National Government, under the provisions of the Teaching Service Acts of 1971 and 1988, hereafter referred to as the "Teaching Service Act," is also responsible for the employment and discipline of all provincial high school teachers who are members of the National Teaching Service (hereafter called the Teaching Service). Two organizations, the National Department of Education (NDOE) and the Teaching Service

Commission (TSC), oversee the performance of the National Government's educational responsibilities. The TSC has final authority in relation to the appointment, promotion, transfer, discipline, suspension, dismissal, or conditions of service of individual teachers and of teachers generally (Government of Papua New Guinea, 1988). The NDOE, on the other hand, is the executive and the inspectorial branch of the NES (Government of Papua New Guinea, 1983, p. 25).

The Provincial Governments, under the provisions of the Education Act, are responsible for drawing up the plans for the establishment of the provincial high schools; supervising the carrying out of the approved educational plans within the province; hearing and determining appeals in cases where the board of governors of a provincial high school expels a student; determining any special criteria that may be desirable to use in the selection of students entering provincial high schools, and selecting the students for these provincial high schools; taking responsibilities for the appointment, promotion, transfer, and discipline of teachers within the province; determining fees that can be paid by the parents of the students; and disbursing and accounting for the moneys made available to provincial high schools by the National Government. The Provincial Divisions of Education (PDEs) are the administrative units that are responsible for the day to day supervision of the implementation of the Provincial Government education functions.

In order to understand the relationships between the National and Provincial Governments, the structures of governments are briefly described in the next part.

Structures of Governments in PNG

As stated earlier in this chapter PNG has a semi-decentralized education system in which the responsibility for provision of education from Grades 1 to 10 is shared between the National and the Provincial Governments. Education at Grades 11 through tertiary education is the responsibility of the National Government. At the time of gaining independence in 1975, PNG had a central government and no provincial governments, although for administration purposes the country was divided into regional areas called *districts*. Soon after independence, Provincial Governments were set up initially to appease those provinces that wanted to break away from the newly independent country, but later Provincial Governments were established in all the provinces. Currently, the nation practices the Westminster system of government with a Governor General, a single-house National Parliament, 19 Provincial Governments, and two Districts, the National Capital District (NCD) and the Kiunga Lake Murray District. The latter report to the National

Government through the Department of Provincial Affairs. The structure of the government system is summarized in Figure 1.1.

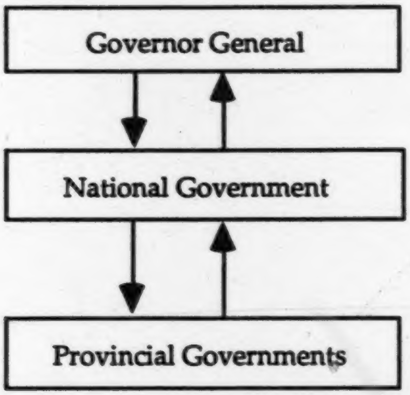


Figure 1.1. **General structure of the government system in PNG**

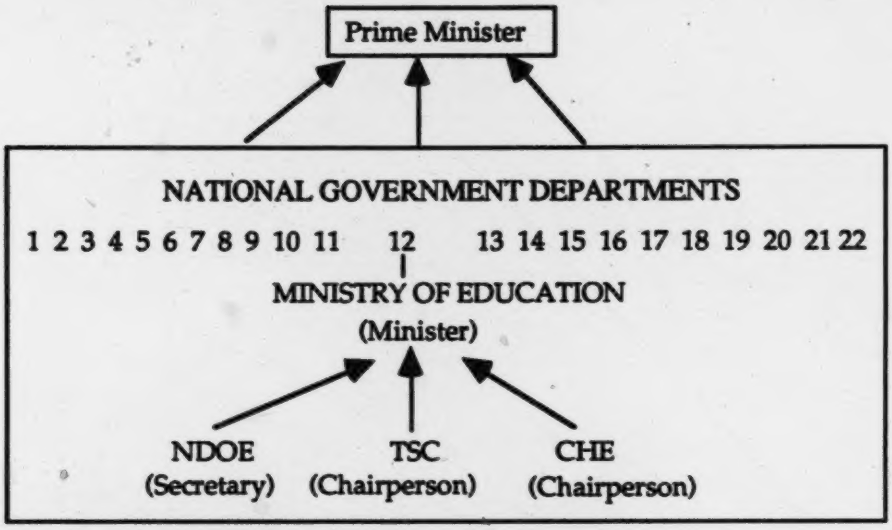
The National Government

The National Government, headed by the Prime Minister, has an executive arm that consists of 22 departments and a number of commissions and statutory bodies headed by Ministers. Figure 1.2 shows the departments as (1) Finance, (2) Foreign Affairs, (3) Provincial and Village Services, (4) Trade and Industry, (5) Home Affairs, (6) Personal Management, (7) Agriculture and Livestock, (8) Fisheries, (9) Justice, (10) Police, (11) Defense, (12) Education, (13) Health, (14) Minerals and Energy, (15) Prime Ministers, (16) Administrative Services, (17) Communication, (18) Civil Aviation, (19) Labor and Employment, (20) Transport, (21) Housing, and (22) Lands. Each of these departments is headed by a Secretary, appointed by the Government, who is the department's most senior civil servant.

The Ministry of Education is headed by the Minister for Education, an elected member of Parliament appointed to the role of Minister by the Prime Minister. The ministry consists of three agencies: the National Department of Education, the Teaching Service Commission, and the Commission for Higher Education (CHE). The latter is not involved with community or provincial high schools. The NDOE is headed by the Secretary for Education, and the TSC and the CHE are headed by Chairpersons. The three are independent organizations, reporting directly to the Minister for Education, as depicted in Figure 1.2.

Provincial Government Structure

The structure of Provincial Governments follows a common pattern, with the Premier at the top as the political head and ministers who are members of the Provincial Assembly, heading different divisions. The executive arm of the province is called a *Department* and is broken down into divisions. The provinces vary in size and natural resources, hence in the structure of their departments. A typical structure is similar to that of the Department of Central Province, as shown in Figure 1.3.

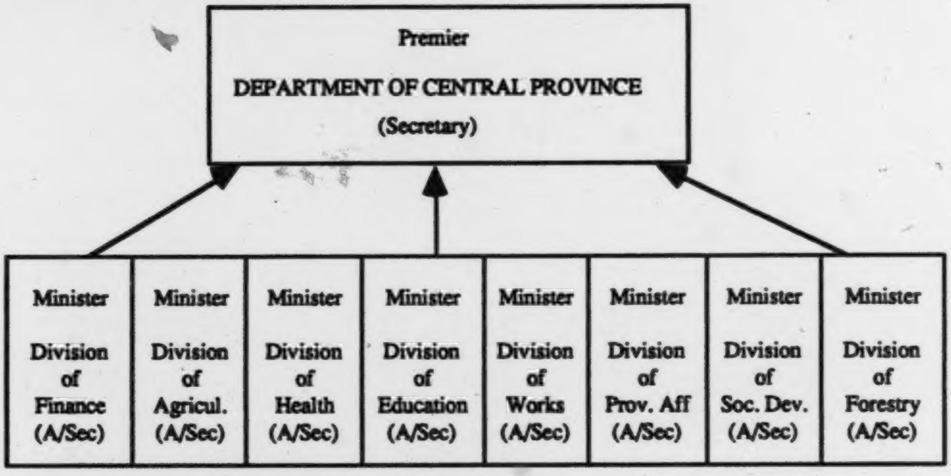

Prime Minister
NATIONAL GOVERNMENT DEPARTMENTS
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
MINISTRY OF EDUCATION
(Minister)
NDOE
(Secretary)
TSC
(Chairperson)
CHE
(Chairperson)

Note: Arrows indicate the direction of reporting.

***Figure 1.2.* Structure of the executive arm of the National Government**

The Provincial Department is headed by a Provincial Secretary, who is the most senior civil servant in the province. The Department of Central Province is broken down into 10 divisions: Finance, Agriculture, Health, Education, Works, Provincial Affairs, Social Development, Forestry, Land, Fisheries and Marine Resources, and Public Service. Each division is headed by an Assistant Secretary (A/Sec). The first eight divisions are depicted in the Figure 1.3 below.

On July 1, 1996, the new Organic Law on Provincial and Local Level Governments of 1995 came into force in PNG. Under the provisions of this law, the political head of the province is now known as the "Governor" and the most senior civil servant as the "Administrator." The provinces no longer have ministries, instead, they have committees that are led by chairpersons. The divisional heads of the civil service are known as advisors. In the case of the division of education, the position formerly known as Provincial Assistant Secretary is now called the "Senior Education Advisor." Under the provisions of this legislation, the National Governments assumes all responsibility for the development of educational policy. The Provincial Governments maintain an implementation role only.


Premier
DEPARTMENT OF CENTRAL PROVINCE
(Secretary)
Minister Division of Finance (A/Sec)
Minister Division of Agricul. (A/Sec)
Minister Division of Health (A/Sec)
Minister Division of Education (A/Sec)
Minister Division of Works (A/Sec)
Minister Division of Prov. Aff (A/Sec)
Minister Division of Soc. Dev. (A/Sec)
Minister Division of Forestry (A/Sec)

Note: Arrows indicate the direction of reporting

***Figure 1.3.* Structure of the Department of Central Province.**

The Purpose of the Study

The delegation of educational authority under the provisions of the Education Act and the Teaching Service Act also shows that concurrent responsibilities exist in some of the roles and functions. Under these arrangements, educational policy and implementation decisions are made at different points in the system. Further, the officials in these organizations answer to different agencies. Although these agencies are autonomous in many ways, they must interact with one another to provide provincial high school education. Given this state of affairs, interorganizational linkages were needed to fulfill the requirements of these educational laws. The purposes of this study were to explore and describe the interorganizational linkages between and among the NDOE, the TSC, and the PDEs; to obtain perceptions about the strengths and effectiveness of these linkages in the operation of provincial high schools; and to assess how their effectiveness could be improved.

The Statement of the Problem

The research question posited for this study was: What interorganizational linkages exist between and among the National Department of Education, the Teaching Service Commission, and the Provincial Divisions of Education; and how effective are they in facilitating the operation of provincial high schools in Papua New Guinea?

Specific Research Questions

With the help of conceptualizations and methodologies articulated by Marrett (1971), Van de Ven and Ferry (1980), and Hall (1996), six specific research questions were formulated as follows:

1. What are the legal, political, and social contexts in which interorganizational linkages take place in the operation of provincial high schools?
2. To what extent are the relationships between and among these organizations mandated, clearly specified, and standardized?
3. In what ways do these organizations influence each other's activities with respect to the flow of resources and information?
4. How do these organizations perceive conflict affecting their relationship with respect to the operation of provincial high schools?
5. To what extent are the linkages between and among the NDOE, the TSC, and the PDEs effective?
6. In what ways might the linkages between and among these organizations be improved with respect to the operation of provincial high schools?

Significance of the Study for Research and Practice

This study had practical and theoretical significance.

Practical Significance

The current arrangement for the administration of education in PNG, and most particularly that of provincial high schools, has been in existence for nearly a quarter of a century. Except for minor changes that were made in the Education Act of 1983, the system has remained largely unchanged since 1970. Further, no empirical work in the area of organizational linkage has been done in PNG. Examining how these organizations operate in relation to one another would better equip the decision makers to design more effective organizations and to alter them in the wake of technological and environmental changes. This study seems to be the first of its kind. It was hoped that the empirical data derived from it would be useful in informing educational administration in PNG. By studying the interorganizational linkages and their effectiveness between and among the participating organizations, the roles and functions of these organizations could be redesigned to create more effective linkages as political and social changes evolve in the technological world.

Theoretical Significance

Organizations surround people; the people are born in them, work in them, and usually die in them. Their outcomes affect the lives of people. They are inevitable and just about impossible to escape. Because they affect our lives so much, we ought to understand how and why organizations behave in certain ways. Das (1990), among others, pointed out that as organizations influence everyone, our future may depend on them. However, in the field of interorganizational linkages there is no agreement on many aspects of the field. For this and other reasons, many researchers and writers have recommended continued investigation of the subject.

Hodge and Anthony (1988), for example, argued that all organizations exist in the macroenvironment in conjunction with others. Thus, it is important for an organization to establish relations with other organizations. Hodge and Anthony added that "by understanding how and why organizations interact with one another for mutual benefit, we are in a better position to explain why organizations behave as they do" (p. 201).

In reference to the public sector interorganizational relationships (IORs), Whetten (1981) found that little research has been conducted in the area. He suggested:

> It would be instructive for public sector researchers to more systematically investigate the perceived sources of conflict and power between various levels of government so that the dynamics of . . . interorganizational relations in the public and private sectors could be compared. (p. 3)

In his study of the linkages and effectiveness of relationship between the Alberta Teachers' Association (ATA) and other organizations, Jeffrey (1989) outlined the importance of interorganizational linkages in educational organizations. He stated:

> The nature of interorganizational and other linkages which are formed are likely to have important implications for an educational organization in pursuit of its various goals. The concept of 'linking' appears to possess considerable utility in explaining interorganizational relationships and thus, is an important area for further study. (p. 3)

Likewise, Rogers and Whetten (1979) reviewed the research pertaining to interorganizational studies to determine future research needs in the subject. They identified two areas in which future research might be focused. First, little recognition has been given to how contextual factors facilitate or constrain interorganizational coordination. They noted that "we know very little about how different social, economic, and political structures and values affect the manner in which public service delivery systems are designed" (p. 4). This statement appears to be relevant to this study because most of the studies on IORs have been carried out in Western nations. Consequently, it is doubtful whether the findings from these studies can be applied in countries such as PNG where social, political, and economic contexts are different. Thus, studying IORs in the Third World countries will contribute to expanding and defining interorganizational linkages in educational administration.

A second area for future research that Rogers and Whetten (1979) recommended is the phenomenon of conflict. They claimed that "conflict as an organizational principle has been neglected. . . . We need to examine functional and dysfunctional roles of conflict in IOR" (p. 12). The current review of the literature confirms this finding. The phenomenon of conflict has been investigated by others as a subunit under resource flows. Consequently, no thorough examination has been made to study its effects on IORs.

The need for an expanded data base from a wide range of organizations was articulated by Hall (1996). He claimed that literature is lacking in "reference to the organizations involved in interaction" (p. 252) and that there is limited "information about the individuals involved in IOR interactions" (p. 253). He concluded that the area of IORs has great research potential.

Other gaps have been identified in the literature. For example, Wiant, Wambrod, and Pratner (1984) claimed that the current literature pertaining to interorganizational linkages shows that "effectiveness" has not been given much attention. Whetten (1981) added that interorganizational linkage research has ignored important questions such as whether public organizations use the recommendations to increase interorganizational coordination as a mask to organizational ineffectiveness and administrative ineptitude. He argued:

> Given these oversights in the literature it is important that future research examine more closely the long tradition in the sociology of espousing the functional consequences of conflict for improving the validity of the system, and the equally well established tradition in political science of examining a program from the vantage point of all its critical constituencies. Utilizing these perspectives will both increase the sophistication of future research on interorganizational relations and greatly enrich our understanding of the phenomena. (p. 24)

Similarly, Intriligator (1992) proposed that "interorganizational policies are needed to guide operations in interorganizational units and to guide decision-making process" (p. 8).

The current review of the literature indicates that little attention has been paid to the development of interorganizational policies. This and other reasons outlined above provide justification for continued research activity in the field of IORs.

In particular, the research findings of the present study should enable readers to comprehend interorganizational linkages in a situation where they are mandated. One common feature of the recent research in the study of interorganizational linkages has been that all of the relationships emerged from voluntary association. In comparison, the roles and functions of each of the organizations in the present study were mandated by law right from the outset; and consequently, voluntary relationships, if any, were a consequence of, and perhaps subordinate to, the formal linkages.

Definition of Terms

The definitions of terms used extensively throughout the study are provided below.

Boundary spanning unit: a unit of the organization which is entrusted with the task of collecting information about the environment and representing the organization to outside agencies.

Boundary spanners: operators in a organization whose tasks and responsibilities require them to interact with operators from member organizations in a interorganizational linkage.

Collaboration: the decision of two or more organizations to combine their resources to attain specific educational goals.

Coordination: two or more organizations create and employ and/or use mandated decision rules to deal collectively with their task environment.

Effectiveness: refers to the perceptions of satisfaction with resources and information flows between and among the organizations.

Efficiency: In the current study efficiency is taken to mean how quickly the resources and information are passed from one organization to another.

Free-place study leave: a leave granted teachers to take up full-time study in educational institutions with pay and other entitlements.

Formalization: the degree to which rules, policies, and procedures govern the behavior and the activities of the organizations in the interorganizational linkage.

Informal relationships: relationships that employees form outside their office environment and that are not job related.

Nonformal relationships: relationships that employees form that are job related but do not adhere to protocol.

Provincial high schools: postprimary schools offering Grades 7 through 10.

Delimitations

Delimitations are "the boundaries beyond which the study is not concerned" (Best, 1981, p. 40). The study of interorganizational linkages with respect to the provision of provincial high school education in PNG was an enormous exercise. The following delimitations were set to make the study manageable:

1. Logistical problems considered, only three types of the organizations, the NDOE, the TSC, and the PDEs were selected for this study. Furthermore, of the 21 PDEs in the country, participation in this study was limited to 6.
2. Only those people who held strategic positions in these organizations took part in this study.
3. The study concentrated on legislative IORs, with some mention of voluntary IORs.
4. At the time of this study, the government of Papua New Guinea had passed and begun implementing the new Organic Law on Provincial and Local Level Government (Government of Papua New Guinea, 1995). Under the provisions of this law, the National Government--and hence the NDOE--assumed responsibility for educational policy making. The Provincial Governments--and hence the PDEs--retained the implementation functions. This thesis covers the period from 1970 to 1995 when the Education Acts of 1970 and 1983 as well as the Teaching Service Acts of 1971 and 1988 were in effect.

Limitations

All studies must address the issue of limitations; that is, "the conditions beyond the control of the researcher that may place restrictions on the conclusions of the study and their application to other situations" (Best, 1981, p. 40). In this study the reader is asked to bear the following in mind:

1. This study focused only on the analyses of the relationships between and among six PDEs, the NDOE and the TSC. Consequently, the findings will not necessarily be representative of the 19 PDEs and the two District Education Boards (DEBs) in PNG.
2. The cooperation of the participants who agreed to be interviewed depended on the anticipated "sense of good will." Thus, the information provided by the participants is limited by the willingness -- or lack of willingness -- of the individuals to contribute it.
3. This study depended substantially on interviews as data sources. Consequently, the quality and quantity of the data collected and analyzed was influenced by the willingness

and the ability of the participants to contribute freely and to articulate their points to the extent that they made sense to the researcher.

4. The ability and the skill of the interviewer to identify and pursue important points highlighted also had an effect on the outcome of this study. The researcher took steps to guard against the loss or distortion of data by pilot testing the procedures to be used, listening attentively, and confirming with interviewees summaries of the interview transcripts and selected quotations from transcripts .

Summary

In this chapter the purpose of the study and the statement of the problem were outlined, as well as the significance of the study for educational administration in PNG and the world at large. This was followed by a discussion of the limitations and delimitations of the study.

Organization of the Thesis

There are 10 chapters in this thesis. In chapter 1 the purpose and the significance of the study were presented. In chapter 2 the literature pertaining to interorganizational relationships is reviewed, culminating in the development of a framework for the analysis of interorganizational linkages in this study. In chapter 3 the research methodology for this research is described. The findings of the study are presented in chapters 4 through 8. With the exception of chapter 8, which addresses two research questions, each data chapter focuses on a single research question. In chapter 4 the contextual dimensions of interorganizational linkages is described. It is followed by a discussion of the structural linkages in chapter 5. In chapter 6 the process dimensions of the linkages are explained and in chapter 7 conflict and conflict resolution practices between and among the organizations are discussed. In chapter 8 the effectiveness of the linkages is detailed, followed by suggestions for improvements. The data chapters are followed by chapter 9, in which the discussion of the findings in the light of literature pertaining to IORs is presented. The thesis concludes with chapter 10, in which a summary of the study and its findings are presented, along with the study conclusions; and implications for theory, practice, and research are stated.

CHAPTER 2

REVIEW OF THE LITERATURE

Research in the field of interorganizational linkages first attracted attention in the 1950s. By the early 1960s more work in the field of interorganizational relationships was made public. But as Galaskiewicz (1985) noted, the body of accumulated knowledge on interorganizational linkages at that time was fragmented and the scholarship uneven. The same trend continues today. The interest in the field had been largely maintained by doctoral students, and much of this research had been focused on educational organizations. This chapter presents a review of the literature on interorganizational relationships that have significance for educational organizations. It is presented in four parts. In part 1, the theory of interorganizational relationships is conceptualized. This is followed by a discussion of the emergence of interorganizational linkages in part 2. In part 3 a framework for interorganizational analyses is presented. In the last part of the chapter the recent research in interorganizational relationships is reviewed.

Conceptualizing the Theory of Interorganizational Relationships

The earliest research in interorganizational relationships appeared in the early 1950s. In the early 1970s the landmark work in interorganizational relationships by Marrett (1971) began the effort towards the development of a theory pertaining to interorganizational relationships. Other writers, including Van de Ven and Ferry (1980), Whetten (1981), Hall (1987 & 1996), and Intriligator (1992), also made contributions towards conceptualizing the theory of interorganizational linkages. The purpose of this chapter is to present a synthesis of the theory developed by these writers. This theory is presented in four sections: dimensions and measurable indicators of IOR, coordination structures, forms of IORs, and conditions for successful IORs.

Identifying Dimensions and Measurable Indicators of Interorganizational Relationships

Marrett (1971) appears to have been the first to review research in interorganizational relationships to attempt to define and provide measurable indicators and dimensions along which interorganizational relations may be studied and to propose the likely association among the dimensions. In her review of the research Marrett discovered five approaches to studying interorganizational relations: interorganizational properties, comparative properties, relational properties, formal contextual properties, and nonorganized contextual properties. The first approach, interorganizational properties, focuses studies on the complexity of the interorganizational relations, its innovativeness, openness of communication, and its access to outside resources. It also focused on autonomy from the parent body and the nature of laws, rules, and norms that govern the behavior of member organizations and individuals. The second approach is called comparative properties. It requires that interacting organizations be compared on certain attributes: similarity of goals, complementarity of resources, compatibility of philosophies, and similarities of structures. The third approach is relational properties. This is the central point of Marrett's (1971) discussion, for it focuses the discussion on the linkages between the parties. Under this approach, the formality of the relationship, its embeddedness, intensity, and the reciprocity, cooperativeness, and symmetry of the relationships are studied. The fourth approach focuses on the formal contextual properties. Central to the discussions on this topic is the notion that the organizational and interorganizational attributes of the larger social system influence further interorganizational development. Studies using this approach have focused on examining extra-local integration, size of organizational set, and history of interlocking relations. The fifth approach, nonorganized contextual properties, looks at the demographic structure, economic conditions, concentration of resources, and community support. This approach emphasizes that there are still other elements in the larger setting that can affect interorganizational relations. From this review Marrett advanced four dimensions of interorganizational exchange--degree of formalization, degree of intensity, degree of reciprocity, and degree of standardization--that can be used to measure interorganizational interactions.

Formalization refers to the degree to which the interdependency is given official sanction by the parties involved. The degree of formalization can be measured by (a) the extent to which the exchange is given official recognition, and (b) the extent to which an intermediary coordinates the relationships. The *degree of intensity* refers to the kind and amount of involvement demanded of interacting organizations. Its indicators are (a) the size of the resource investment, and (b) the frequency of interactions. The *degree of reciprocity* can be indicated by (a) a mutual flow of elements, where a given behavior prompts a return; (b) the extent to which conditions of the exchange are mutually agreed upon; and (c) the power balance of the interacting organizations. The *degree of standardization* refers to the extent to which the units of the exchange are clearly delineated. The standardization of exchange can be measured by (a) the fixedness of the units of exchange, and (b) the fixedness of procedures for exchange.

Similarly, Van de Ven and Ferry (1980), from a review of the research on interorganizational relationships, also suggested a framework for the investigation of interorganizational relationships (pp. 301-306). This framework has three dimensions: process, structural, and situational factors. Under the *process* dimension, the investigation, Van de Ven and Ferry (1980) suggested, should examine the resource flows and information flows between organizations. Resource flows include money, physical space and equipment, customer or client referrals, and other materials and services; and information flows are messages or communications about the units of exchange or the nature of the relationships that are transmitted between the organizational parties through a variety of media. To measure the resource flows between and among the organizations, the investigation should focus on the resource flows' direction and variability. Under information flows, the direction of the flows, frequency, and quality or conflict should be examined.

Further, in investigating the *structural* dimension, Van de Ven and Ferry (1980) proposed that research should attempt to identify nominal classifications of alternative types of structures, such as mediated versus ad hoc or unmediated arrangements; federated versus corporate structures; or unitary, federative, coalitional, and social choice interagency networks. They identified four dimensions--formalization, complexity, centralization, and intensity--which in their view would capture the essence of interorganizational network. *Formalization* is the degree to which rules, policies, and procedures govern the role behavior and activities of organizations in networks. The *structural complexity* of a network refers to the number of different elements that must be integrated for the interorganizational relationship to act as a unit. *Centralization* refers to the centrality of decision making and centrality of information and resource flows. *Intensity* is the strength of the network in terms of the sum frequency of information out-flows and the amount of resource out-flows to other agencies in a network.

Under *situational factors*, six dimensions of investigation are suggested: resource dependence; response to problem, opportunity, or mandate; awareness; consensus; domain similarity; and size. *Resource dependence* refers to an agency's need for external resources and other agencies in the network. *Response to problem, opportunity, or mandate* refers to an agency's perceived willingness to respond to external problem, opportunity, or mandate. *Awareness* includes the knowledge of system needs, problems, or opportunities; the knowledge of other agencies' services and goals; and the personal acquaintance of agency representatives. *Consensus* factors include agreement among the agencies on solutions to needs or problems, agreement on services and goals of agencies in the network, and conflict on means and ends of the network. *Domain similarity* refers to the sameness of agency goals, services, staff skills, and clients with other agencies in the network. *Size* refers to the number of agencies in the network.

Hall (1987, 1996) also identified dimensions for the study of IORs in the form of a framework. This framework consists of five dimensions: general environmental characteristics, situational factors, reasons for interaction, resource flows, and transactional forms. The *general environmental characteristics* include the technological, legal, economic, political, demographic, ecological, and cultural conditions that may impact upon the IOR. Other factors include turbulence, environmental complexity, homogeneity-heterogeneity of the environment, stability-instability of the environment, and the concentration-dispersion of resources. The *situational factors* include the organization's awareness of other organizations in the field, domain consensus-dissensus, geographical proximity, localized dependence, and size of the IOR.

Similarly, Hall (1996) suggested that the analysis of the *reasons for interactions* could be focused upon the bases of interaction: ad hoc bases, exchange bases, formalized agreements, and the mandatedness of the interaction. The study of *resource flows*, on the other hand, would focus on resource interdependence, intensity of the resource flows, and joint programs. *Transactional forms* include the examination of interaction formalization, interaction standardization, importance of the interaction, frequency of the interaction, reciprocity, power in IOR, cooperation, conflict and conflict resolution, and coordination.

Coordination Structures

The early theorists also suggested types of coordination structures that could be established in IORs. Marrett (1971) proposed two different interorganizational models. The first is a model characterized by low degree of formalization, standardization, and intensity. The second model is characterized by highly formalized, standardized, and intense situations. The first model occurs with some degree of frequency, whereas the second is far less likely. She concluded that "if this is indeed the case, then additional research is needed, not so much on the first model, as on the constraints to the realization of the second model" (p. 97).

Whetten (1981), on the other hand, identified three types of interorganizational coordination structures: mutual adjustment, alliance, and corporate structure. A *Mutual adjustment* structure typifies coordination that occurs in a competitive market. The focus in a mutual adjustment situation is on the participating agencies or their clients. There are very few shared goals towards which the units work. Coordination tends to focus on specific cases rather than on the development of a comprehensive delivery system. Control over organizations is achieved through common agreement among the organizations. Conflict is resolved through negotiation and bargaining.

An *alliance* structure represents efforts to coordinate autonomous organizations without the authority of a formal hierarchy. According to Whetten (1981), alliance structures contain elements of both the mutual adjustment and the corporate structures. Power in alliance structures is distributed in two ways. One way involves the formation of a central administrative unit that responds to the wishes of the member agencies, and the second involves forming a council or a coalition. In the latter the authority system is more informal, and power is lodged in each member agency.

In the *corporate* structure coordination occurs under the umbrella of an overarching formal authority structure. Units being coordinated are members of an encompassing organization. The objective of each unit is to achieve the interagency system's goals. Activities are divided among specialized units, and each performs according to the central plan. There is strong central control, which is achieved through the use of regulations that constrain the actions of member units or through the distribution of conventional sanctions.

The most recent theorization in the field of interorganizational relationships was undertaken by Intriligator (1992). She suggested an organizational framework for establishing effective partnerships between school systems, social service providers, universities, and/or the private sector. She proposed three approaches that may be used to accomplish interagency initiatives successfully: cooperation, coordination, and collaboration. In *cooperative* interagency arrangements agencies remain autonomous, agreeing to work together only to accomplish a short-term, very focused goal. These agencies conduct their businesses as usual, except for collective activities around the conference. When the conference is over, the interagency effort is finished. Sometimes the agencies elect to work together on a longer term initiative to confront an activity. They therefore form a council to coordinate their efforts. In a *coordinative* interagency arrangement representatives of agencies may sit on an interagency council that has specified responsibilities. Resources from participating agencies are contributed systematically to the initiative. *Collaborative* interagency effort, on the other hand, requires agencies to relinquish some of their autonomy in order to work together with other organizations. Everybody's energies, skills, and resources are needed to fulfill the collective enterprise. Interagency effort requires more initial time and planning to accomplish as agencies establish those organizational conditions and interpersonal relationships that will support and enable the interagency effort to be successful. Intriligator warned that collaboration requires a much more intensive effort by agencies than does cooperation or coordination. Consequently, it is important to establish the type of interagency arrangement that is most suitable to accomplish a particular initiative.

Intriligator (1992, p. 24) subsequently presented seven interorganizational concepts that can be applied under each of the interorganizational configurations discussed above. These are interagency objective, interagency policies, interagency structure, personal roles, resource allocation, power and influence, and interagency relationship. She added that these elements represent aspects of the design of an interagency unit and organizational process that guide effective unit operation.

Forms of Interorganizational Linkages

The forms of interorganizational linkages fall into two categories: those that are mostly applicable to the private sector and those that are applicable to all organizations, including public service organizations. This section presents the forms of linkages that are relevant to all, including educational organizations.

From a review of the IOR literature, Van de Ven and Ferry (1980, p. 298) proposed three forms of interorganizational relationships: pairwise or dyadic IORs, interorganizational sets, and interorganizational networks. According to them, the *dyad* "is the basic building block for studying [interorganizational relationships] and is concerned with understanding the relational properties between organizations" (p. 297). The *interorganizational set* "focuses upon the cluster of dyadic [interorganizational relationships] of one focal agency (FA) with other member agencies (MA) in its environment" (p. 298). It does not, however, consider the relationships between the member agencies as a total group.

Interorganizational networks are more inclusive. As Aldrich (1979) suggested, interorganizational networks consist "of all organizations linked by a specified type of relation, and constructed by finding the ties between all organizations in a population" (p. 281). Van de Ven and Ferry (1980) defined interorganizational networks as

> the total pattern of interrelationships among a cluster of organizations that are meshed together as a social system to attain collective and self interest goals or to resolve specific problems for a target population. The primary focus of analysis shifts from the relationships between agencies to patterns of relationships among an identifiable cluster of organizations bound together by allied domains, geography, target client population, or problems. (p. 299)

In a similar vein, Whetten (1981, pp. 5-10) also identified four forms of IOR: dyadic linkage, organizational set, action set, and networks. The first is dyadic linkages, just as Van de Ven and Ferry (1980) suggested. Whetten explained that *dyadic linkage* is formed when two organizations find it mutually beneficial to collaborate in accomplishing a common goal. They may agree to share risks, coordinate the various aspects of the two organizations' productive activities, and coordinate their respective activities to increase efficiency. This form of relationship is generally less formal and depends on the informal agreements between the initiators and, as a result, is vulnerable to turnover in organizational personnel.

The *organizational set* refers to the total sum of interorganizational linkages established by an organization. An organizational set is usually constituted around a focal organization. Whetten (1981) claimed that it is not a true network because, although the dyadic linkages between the focal and interacting organizations are examined, the relationship between the interacting organizations is ignored. *Action sets*, according to Whetten, "are essentially purposive networks;. . . they are coalitions of organizations working together to accomplish a specific purpose" (p. 8). The concept of *action set* refers to an interacting group of organizations, whereas the concept of organizational set is explicitly centered on a single focal organization . He outlined the four conditions, previously identified by Phillips (1960), that affect the degree to which an interorganizational set will be able to achieve and coordinate behavior: the number of organizations in the action set, the extent to which a single powerful organization assumes leadership role, similarities in values and attitudes among the members, and the impact of other action set behavior. *Networks*, according to Whetten (1981), consist of all interactions between and among organizations in a population, regardless of how the population is organized into dyads, organization sets, or action sets.

Importance of IORs

Following along the patterns applied by Van de Ven and Ferry (1980), Hall (1987) concentrated his review of the literature on identifying the importance of interorganizational relationships (IORs) and a framework for interorganizational analysis. He advanced the two reasons identified by Cook (1977) for increased importance of IORs. First, organizational theorists and analysts have come to conceptualize organizations as open, adaptive systems rather than closed systems. Because organizations are open systems, they interact with their environments, and this interaction is critical to their viability. The second factor relates to the growing awareness on the part of the organizational theorists and analysts that research on organizations was primarily focused on case studies of single organizations, and thus did not adequately provide an understanding of complex social structures of rapidly changing environments. These realities provided the motivation for the study and the understanding of complex organizations and their environments.

Conditions for Successful IORs

Whetten (1981) also suggested preconditions for successful coordination. He divided these into voluntary and mandated coordination. For successful voluntary coordination to take place, organizations must have a positive attitude towards coordination. They must be able to recognize the need for coordination and be aware of potential coordination partners. The organizations must be able to assess the compatibility and desirability of the coordination processes and must have the capacity to maintain the coordination process. In mandated coordination, the organizations must have an awareness of the mandate, be able to assess the compatibility and desirability of the coordination, and have the capacity to maintain the coordination process.

In reference to educational organizations, Intriligator (1992) concluded that organizations involved in school partnerships are more likely to succeed when organizational conditions that are established approximate the characteristics of collective interagency efforts. In collaborative enterprises, for example, single agency/partner resources and/or expertise are, or are perceived to be, adequate to address the complex needs of the client or program. Partners assume mutual responsibility for developing and improving the intended program and services. Also, partners transform their collective activities from initial interpersonal relationships to the development of facilitative organizational structures within that partnership planning and development can occur. Further, the type of interorganizational structure established is suitable to the proposed collective outcome, and organizations devote time and energy both to program development issues and to establishing and maintaining positive relationships among partners. Finally, periodic assessments of the effectiveness of the partnership arrangements are conducted, and mid-course corrections are undertaken.

Summary

Thus far, the theoretical frameworks advanced by various researchers have been presented. This review has been necessary to inform the reader and the researcher of the historical attempts towards developing a theory of interorganizational relationship. The search for measurable indicators of IORs and approaches to analyzing IORs has led to the identification of quantifiable variables such as cooperation and coordination (Intriligator, 1992; Whetten, 1981); bases for interaction, conflict and conflict resolution (Hall, 1996); environmental factors, situational factors, structural factors, and process factors (Van de Ven & Ferry, 1980); and degrees of formalization, intensity, reciprocity, and standardization (Marrett, 1971). It has also led to identification of nonquantifiable variables such as intensity and satisfaction (Hall, 1996; Van de Ven & Ferry, 1980). These variables are some of the indicators that are discussed in the current study. Further, the theory of interorganizational relationship, thus presented, provides the backdrop from that the framework for the present study is developed. This theory is detailed later in this chapter.

Emergence of Interorganizational Linkages

The literature has identified five reasons for the emergence of interorganizational linkages: resource acquisition, protection, opportunity for growth, mandates, and power acquisition. Each is briefly described below.

Resource Acquisition

Van de Ven and Ferry (1980), from a review of the literature pertaining to interorganizational linkages, found that organizations form IORs because of "an internal need for resources" (p. 307). This finding is corroborated by Hall (1996). From a review of the literature pertaining to private sector director interlocks, he found that interlocks provide access to resources. He concluded that interorganizational linkages through "director interlocks are a means by which the resources that are important to organizations and their relationships flow between organizations. They can give an organization a competitive advantage through access to financing, information and other resources" (p. 251). Similarly, Daft (1989) and Evans and Boyd (1991) from reviews of the literature, made similar claims.

Protection From the Environment

Organizations exist in turbulent and competitive environments. They form IORs to protect their interests against external environmental effects. Whetten (1981) described interorganizational arrangements as "an effective means of gaining control over uncertain environmental conditions" (p. 3). Daft (1989) made similar remarks when he argued that organizations can "reduce vulnerability and uncertainty through formal linkage to other organizations" (p. 63). In a review of the literature pertaining to child care consortiums by employers, Morgan and Spearly (1984) concluded that forming a consortium was a way of providing protection to the employers from the common problem of underutilization when individual needs for individual employers changed. A joint venture among several organizations offered the "advantages of shared-risk taking" (p. 2). Similarly, Hodge and Anthony (1988) concurred that IORs are developed in order to "reduce uncertainties and gain control over the key aspects of the enacted environment" (p. 202).

Opportunity for Growth

Organizations form IORs not only to control uncertainties of the environment, but also to take advantage of the opportunities that the environment presents. Van de Ven and Ferry (1980) concluded that organizations form IORs to respond to external information about opportunities for development. In a synthesis of six recent studies on IORs, Cates (1983) concurred with Van de Ven and Ferry (1980). Similarly, Evans and Boyd (1991) proposed that IORs are a valuable way to assure the maintenance and the growth of the organization.

In a case study of interagency planning between cities and schools in urban areas, Witkins (1979) concluded that the impetus for joint planning came from the realization that the serious economic and social problems they faced could be better "addressed jointly than individually, in order to use resources more effectively" (p. 4). Likewise Ratsoy (1980), in an article describing environmental linkages and policy making in educational organizations, made similar conclusions. Jeffery (1989) studied the linkages and effectiveness of relationships between the Alberta Teachers' Association and other organizations. He found that these organizations established IORs because they "provided opportunities to discuss areas of common ground and common goals, and to foster a spirit of cooperation and support" (p. 93).

Mandates

Some IORs are mandated by law (Van de Ven & Ferry, 1980). That is, they are not voluntarily formed. Cates (1983), from a review of six investigations providing data on formal interorganizational arrangements, found that most formal interorganizational arrangements arise in response to external influence in the form of a "mandate or enablement" (p.12) for the improvement of the efforts of the organizations. Organizations with similar interests and aims are bounded by law to work together in accomplishing objectives.

Power and Control

Power and control are exercised in interagency interaction in several ways. For example, Morgan (1997) described the use of countervailing power to control counter-organizations. Unions may form IORs to counter the power of employers. According to him, the principle of countervailing power is often used by the leaders of large companies, "who in effect play a form of chess with their environment, buying and selling organizations as pawns" (p. 188). He added that organizations also form IORs to "control boundaries". By monitoring and controlling boundary transactions, people in organizations build up considerable power to take control of knowledge and information and, hence, control decision processes (Morgan, 1997).

Daft (1989) outlined the dilemma that formal relationships with other organizations present to managers. Organizations seek to reduce their vulnerability with respect to resources by establishing links with other organizations, but at the same time they do it to maximize their power. As Hall (1987) suggested, interlocking in the private sector occurs to "reduce the autonomy of other organizations" (p. 256), and it becomes a device for managing competition to control uncertainty in corporate profit. By forming IORs, organizations increase their power to manage the uncertainty in their environments.

Organizations get involved in interorganizational linkages for many reasons. This section of the literature review has presented five factors that have been identified in the literature as possible motivators to public sector organizations, including educational ones, to seek and form IORs. All of these factors are useful to this study, but, of most interest is *mandate*. As mentioned in the introductory chapter, the linkages between and among the organizations in this study are largely mandated. The effects of the other factors were analyzed within that legal environment.

Framework for Interorganizational Linkage Analysis

The landmark works of Marrett (1971), Van de Ven and Ferry (1980), Whetten (1981), Hall (1987), Intriligator (1992), and Hohomann (1985) have suggested frameworks for interorganizational linkage analysis. These frameworks reflect the variations and differences that exist in conceptualizing and understanding interorganizational linkages. There appears to be no acceptable framework that can be applied across all types of interorganizational relationships.

From the literature reviewed, the following framework may be taken as one that puts into perspective all that has been suggested. This framework consists of six dimensions: general environment characteristics, situational factors, structural characteristics, a process dimension, effectiveness, and conflict and conflict resolution. Each dimension is described briefly below.

General Environmental Characteristics

Environment is an important element not only for the social context in which organizations exist, but also as an important determinant of organization structure and process (Hall, 1987). Consequently, the analysis of interorganizational linkages can be focused upon the technical, legal, political, economic, demographic, ecological, and cultural conditions. The climate and preconditions that are conducive to or resistant to interorganizational linkage should also be studied (Hohomann, 1985).

Situational Factors

Situational factors are invariably referred to as determinants to participating in interorganizational linkages by some of the writers. Van de Ven and Ferry (1980, p. 308) proposed that analyses associated with this dimension should focus upon the resource dependence among the agencies, awareness of system needs, problems, and opportunities. Analyses should also be made of other agencies' services and goals, personal acquaintances of agency representatives, consensus and conflict among the agencies on solutions to needs or problems, services and goals of agencies in the network, and the means and ends of the network. They should also focus upon the domain similarity of the agencies in the network: the sameness of goals, services, staff skills, and clients; the size, that is the number of agencies in the network; and the geographical proximity of the agencies (Hall, 1987). Whetten (1981) added that an analysis of the awareness of the potential for IOR should also be made, and Hohomann (1985) thought that factors causing organizations to make specific commitments with other organizations should be analyzed as well.

Structure

According to Van de Ven and Ferry (1980) *structure* "refers to the administrative arrangements that are established to define the role relationships among members" (p. 301). Structural variables for analysis include basis of interaction, ad hoc or exchanged basis, formalization, mandatedness, complexity, intensity, and centralization.

An *ad hoc* relationship, according to Hall (1996), has little or no previous patterning in the relationship among the organizations. Levine and White (1961) explained that an exchange basis in IORs is "voluntary activity between two organizations that has consequences, actual or anticipated, for the realization of their perspective goals or objectives" (p. 120).

Formalization of the interorganizational linkage is another area of study identified in the literature. Marrett (1971) suggested that analysis of formalization should focus upon the degree to which the interdependency is given official sanction by the parties involved and the extent to which a coordination mechanism exists between the organizations. Van de Ven and Ferry (1980) added that analysis should also focus upon the extent to which rules and policies are established to govern transactions between organizations and the number of procedures followed by committees or groups that govern the network. Further, Hall

(1987) postulated that investigation should also focus on the specified pattern upon which interactions are required to be based once the general agreement is signed or otherwise authorized.

Mandatedness, according to Hall (1996), "refers to the extent to that relationships are governed by laws or regulations. These laws or regulations are imposed on the relationship by legislative or administrative rulings" (p. 239). Thus, Whetten (1981) maintained that in studying mandated IORs measurement should focus on the member organizations' awareness of the mandate, its compatibility and desirability, and its capacity for maintaining IORs. The *complexity* of the IORs should make up an important variable for investigation. Similarly, Intriligator (1991) added that the complexity of the IOR's objectives should also be studied. Van de Ven and Ferry (1980) argued that analysis should be focused on the structural makeup of the IOR, most specifically on identifying the number of different elements that must be integrated. Adding to the above, Hall (1987) suggested the study of horizontal differentiation, vertical differentiation, and spatial dispersion in the relationship.

Marrett (1971) described *intensity* as an indication of the degree of activity in the interorganizational network. This involves the frequency of activity and the size of resources consumed by the activity. The literature has described *centralization* in terms of the centrality of the decision making and centrality of information and resource flows. The centrality of decision making refers to the locus of authority in the network, whereas the centrality of networks refers to the pattern of connections between agencies in terms of information and resource flows (Van de Ven & Ferry, 1980).

Process

Van de Ven and Ferry (1980) conceptualized *process* as a flow of activities between two or more organizations. According to them, process refers to the direction and frequency of resources and information that actually flow between the members. They described resource flows as the "units of value that are transacted between organizations" (p. 301) and information flows as "the messages or communication that are transmitted between organizational parties through a variety of media" (p. 302).

Resource flows analysis is focused on resource interdependence, whether horizontal, vertical, or symbiotic interdependence (Hall, 1987). When there is horizontal interdependence all members of an organizational set compete with each other in obtaining resources and disposing of goods and services. In vertical interdependence organizations interact at various stages of the production of goods or delivery of services. Symbiotic interdependence occurs when organizations complement each other in rendering service to individual clients. Van de Ven and Ferry (1980), from their review of the literature, concluded that the major dimensions for measuring resource flows between organizations are their direction, amount, and variability.

Analyses of information flows between the organizations, on the other hand, have focused on the frequency (Intriligator, 1991; Van de Ven & Ferry, 1980), direction, and quality or conflict (Van de Ven & Ferry, 1980). The intensity of interaction refers to the level of resource investment required of the organizations involved (Marrett, 1971). The higher the proportion, the more intense the relationship and the greater the dependency (Hall, 1996). The more intense the relationship, the more important it is for the organizations involved.

Effectiveness of Interorganizational Linkages

The concept of *effectiveness*, either in interorganizational or in intraorganizational relationships, is an important aspect for investigation. Pennings (1980) observed organizational effectiveness is important both for pragmatic considerations and as a critical concept in organizational theory. Despite its importance, the concept of effectiveness has not been well studied. Consequently, there is no agreement as to which aspects of this concept should be focused upon for the study of IORs. From the limited literature available, Hall (1987) and Van de Ven and Ferry (1980) identified *frequency* and *satisfaction* as variables to be measured to determine the effectiveness of interorganizational linkages. Interactions can have high or low frequency on the basis of voluntary exchange, formal agreements, or mandates. Assessment can be focused on the frequency of information and other resources exchanged between the organizations, their timing and intensity, and the degree of collaboration and harmony among the member organizations.

Conflict and Conflict Resolution in IORs

The term *conflict* has been defined by many authors. Follett (1925; cited in Metcalf & Urwick, 1957) defined conflict as "the appearance of difference, difference of opinions, [and] of interest" (p. 17). Rahim (1986; cited in Hanson, 1991) defined it "as an 'interactive state' manifested in incompatibility, disagreement, or differences within or between social entities" (p. 273). Similarly, Banner and Gagne (1996) defined the term conflict from a structural perspective. In their view, "conflict refers to disputes or disagreement between units of organizations, not simply between individual organization members" (p. 396). However, as Cooze (1989) noted, there has been no agreement among the researchers on the specific definition of conflict. For the purpose of this study, Rahim's definition will be used. To exist, conflict must be perceived as "conflict" by the parties to it (Robbins, 1987).

Conflict can have a great deal of influence on the IOR. The types of conflicts that occur within an IOR and how these conflicts are resolved can have grave consequences for the effectiveness of the interorganizational linkage. Yet, although the concept of conflict has been well studied and documented over the years, the scholarship has focused largely on addressing interpersonal and intergroup conflict in intraorganization. Interest in interorganizational conflict has not been widespread. The major reason is that even when research has been focused on interorganizational conflict, there is considerable similarity to the findings on intraorganizational conflict as suggested by March and Simon (1958). They claimed that "many of the phenomena of intergroup conflict within organizations are almost indistinguishable from the phenomena that we might consider under [interorganizational conflict]" (p. 131). Notwithstanding March and Simon's claim, conflict is pervasive in all human interaction. Since interorganizational interaction is human interaction, it is worthy of specific attention in a study of interorganizational linkages.

In reference to interorganizational conflict, Hall (1996) proposed that "conflict can occur at individual and collective levels and within and between social systems" (p. 245). He added that collectively based conflict is more complex, for it involves situations in which an entire organization is involved in the conflict. Building on the work of Molnar and Rogers (1979), Hall (1987) suggested that conflict can take several forms in interorganizational relations. He noted that "some conflict is regulated, as in competition, while other conflicts take place outside of a regulatory base" (p. 245). Whether interorganizational conflict is regulated or not, it can appear in different forms. Interorganizational conflict can be verbal or nonverbal, manifest or latent, and may range from intellectual jousting or malicious gossip all the way to the use of physical force (Borisoff & Victor, 1989; Cooze, 1989).

To help conceptualize the causes and effects of conflict, effort must be made to understand the nature of interorganizational conflict. Deutsch (1973, pp. 5-7), for example, recommended knowing something about the characteristics of the parties in conflict: the parties' prior relationships with one another; the nature of the issue causing the conflict; the social environment within which the conflict takes place; the interested audiences to the conflict; the strategy and tactics employed by the parties involved in the conflict; and the consequences of the conflict for each of the parties and the interested audiences. Finally, Banner and Gagne (1996) pointed out that "conflict can be functional" (p. 413). Consequently, investigation of interorganizational conflict should also focus on identifying positive and negative outcomes of conflict.

An attempt to pull together the different frameworks advanced in the literature generated six dimensions--environmental characteristics, situational factors, structure, process, effectiveness, and conflict--that led to the development of a framework, as shown in Figure 2.1, for the present study.

This study has borrowed heavily from this literature. Two of the dimensions, environmental characteristics and situational factors, were combined to form a single "contextual" dimension, and the others have been adopted for this study without change. Development of this framework was useful in guiding the study.

Recent Research on Interorganizational Linkages and Effectiveness

In the last 20 years not much attention was paid to the study of interorganizational linkages and their effectiveness. Interest in the field seemed to have been maintained mainly by doctoral students, especially those from the University of Alberta. The first to initiate interest in IORs at the University of Alberta was Andrews (1978), who studied interorganizational relationships and their effectiveness in a program for the preparation of allied health professionals in Alberta and Ontario. Following Andrews, several other researchers carried out studies. What follows in the remainder of this chapter is a descriptive summary of the types of relationships investigated, the research methodologies applied, and the conclusions drawn from these studies.

Research Methodologies Employed

As stated earlier in this chapter, Van de Ven and Ferry (1980) identified three forms of interorganizational relationships: pairwise or dyadic IORs, interorganizational sets, and interorganizational networks. By and large, the majority of the studies (Brownlee, 1990; Germscheid, 1982; Jeffery, 1989; Mann, 1982; Mutema, 1981) investigated IORs in interorganizational set. Two studies (Andrews, 1978; Kennedy, 1984) analyzed interorganizational networks. Only one study (Intriligator, 1992) investigated a true dyadic IOR. In all cases, the findings were presented in terms of dyadic IORs between pairs of organizations.

An analysis of the research methodologies employed revealed that the questionnaire was the primary method of data collection used by these researchers. Of these, Andrews (1978), Mutema (1981), Kennedy (1984), Jeffery (1989), and Brownlee (1990) also employed interviews as a secondary source of research data. Only one researcher (Intriligator, 1992) approached her study from the qualitative paradigm. Amongst the studies that employed questionnaires, Andrews, Germscheid (1982), and Kennedy based their investigations on the framework suggested by Marrett (1971); whereas Mann (1982), The Five Frames of Interorganizational Linkages

1. Contextual Frame
    - Technical
    - Legal
    - Political
    - Demographic
    - Cultural
2. Structural Frame
    - Roles and responsibilities among members
    - Basis of interaction
    - Formalization
    - Mandatedness
    - Intensity
    - Complexity
    - Centralization
3. Process Frame
    - Resource flows
    - Information flows
        - . intensity
        - . direction
        - . frequency
        - . timing
4. Conflict and Conflict Resolution Frame
    - Perception of conflict
    - Types of conflict
    - Conflict resolution techniques
    - Outcomes of conflict
5. Effectiveness of Interorganizational Linkages Frame
    - Intensity
    - Satisfaction

Figure 2.1. Conceptual framework for the study.

Jeffery, and Brownlee used or adapted and applied the Organizational Analysis Instrument (OAI) developed by Van de Ven and Ferry (1980).

Research Findings

Not only were there methodological differences in these studies, but the findings also differed, as summarized below.

In his study of the interorganizational relationships and effectiveness in a program for the preparation of allied health professionals in Alberta and Ontario, Andrews (1978) concluded that the degree of program integration was difficult to assess especially in relationship to the linkage dimension profile. However, he suggested two possible relationships: (a) The degree of program integration is positively related to the linkage variable *frequency of integration*, and (b) the degree of integration and frequency of interaction tap the same dimension. In relation to the possible relationship between the linkage dimensions and program effectiveness, Andrews noted two important findings. First, there were differences in program effectiveness as assessed by the different measures of program effectiveness that were used. This lent support to the hypothesis that organizations can be effective on one effectiveness measure, but often at the expense of effectiveness on another. Second, there appeared to be some evidence to support the generalization that if a joint cooperative program is characterized by high formalization, standardization, and relative resource commitment in its linkage dimensions, then the cooperative program is more likely to result in higher student achievement than a program characterized by low formalization, standardization, and resource commitments.

From the examination of linkage dimensions for the four programs he studied, Andrews (1978, pp. 266-267) suggested five generalizations for further study in joint cooperative programs:

1. If a joint cooperative program is characterized by a high relative resource commitment and the resource commitment is symmetrical between the interacting agencies, then the cooperative program is likely to be characterized by high formalization and definitional reciprocity.
2. If one organization engaged in a joint cooperative program has a high relative resource commitment, then the cooperative program is likely to be characterized by high formalization and structural standardization (coordination).
3. If a joint program demonstrates an asymmetrical relative resource commitment, then the cooperative program is also likely to demonstrate low definitional reciprocity.
4. If a joint cooperative program is characterized by a symmetrical resource commitment and the resource exchange is low, then the cooperative program is likely to be characterized by low formalization and structural standardization (coordination).

5. If a joint cooperative program is characterized by a high degree of agreement formalization, then the cooperative program is likely to be characterized by high structural and procedural standardization.

Similarly, in his study of relationships that might exist between interorganizational linkages and perceived program outcomes in Work Experience Education in secondary schools in Alberta, Canada, Germscheid (1982) generated nine propositions that, he argued, stem from the data generated in the study. Of interest are propositions 6 and 7, which read:

> If a cooperative program is characterized by a high degree of resource exchange and high degree of official sanctions formalization, it is likely that the program will be characterized by higher frequency of interaction; [and] if a cooperative program is characterized by a high degree of official sanctions formalization and a high degree of frequency of interaction, it is likely that the program will be characterized by a higher degree of resource exchange agreement. (p. 162)

Germscheid warned, however, that these findings are tentative. In order to accept or reject these propositions on linkage dimensions in a cooperative program, they should be carefully tested.

In a master's thesis Kennedy (1984) studied the interorganizational relationships in three allied health joint cooperative training programs. The major purpose of his study was to investigate the linkage characteristics of the three allied health programs in order to determine whether Andrews' (1978) propositions held true for joint cooperative programs other than the Respiratory Technology program of his study. Among other findings, Kennedy (pp. 136-137) discovered that none of the programs investigated had all of the individual characteristics required to support Andrews' four propositions. Two of the three programs studied had at least two characteristics each that did lend support to Andrews' generalizations. One program had no relationship consistent with any of the generalizations. Kennedy consequently concluded that Andrews' five generalizations hold true for some programs but not all.

Mutema (1981), who studied interorganizational linkages and the effectiveness of clinical practices between the Medical Training Center (MTC) and eight provincial hospitals in the departments of occupational therapy and physiotherapy in Kenya, drew three major conclusions from his study. First, medical training institutions and teaching hospitals may develop voluntary interactions for the purpose of specific goal attainments without formal agreements. These voluntary interactions may be characterized by informal agreements, low procedural standardization, and varying degrees of intensity and reciprocity. Second, health programs considered ineffective by students may be considered effective by qualified allied health professionals. Third, it was difficult to establish the impact of linkage dimensions on the effectiveness of clinical practice in the two allied health professions considered in the study. The reason was that the relationship between the MTC and each of the provincial hospitals varied from hospital to hospital.

Unlike Andrews (1978) and Mutema (1981), who studied IORs in educational organizations within the public sector, Mann (1982) carried out a descriptive case study of interorganizational linkages in a cooperative education program involving both public and private sector organizations. This study involved examining the Cooperative Education program of the Faculty of Engineering at the University of Alberta. Unlike Andrews who formulated generalizations using symmetry of resource committment as a base, Mann limited her generalizations to identification of the most significant situational and structural linkage dimensions for each of the public and private agencies. According to Mann (p 164):

1. There were more structural variables related to situational variables for private sector agencies than there were for public sector agencies.
2. Resource dependence and consensus were the most significant situational variables for private sector agencies.
3. Awareness was the most significant situational variable for public sector agencies.
4. Influence was the most significant structural variable for public sector agencies.
5. Formalization and influence were the most significant structural variables for private sector agencies.

Mann (1982) found that the most significant correlation existed between effectiveness and the linkage dimension of awareness, followed by the correlation between resource dependence and influence. In relation to the effectiveness of the program, Mann suggested that "the findings of effectiveness should be regarded as interim and the effectiveness variable should be measured at frequent intervals to facilitate effective decision-making regarding program policy, procedures, and development of objectives" (p. 165). In conclusion, Mann suggested that all studies of interorganizational relationships should be done in "recognition of the social and economic context in which the relationship exists" (p. 173).

In a study employing both qualitative and quantitative data collection methodologies, Jeffery (1989) studied the linkages and the effectiveness of relationships between the ATA and other organizations. Jeffery found that there were numerous differences among the types of relationships, in the strengths of the linkage dimensions, in the extent of conflict resolution, and in the degree of effectiveness. He also concluded that the linkage dimensions approach and the instruments developed by Van de Ven and Ferry (1980) are useful for studying relationships in an organizational set.

Following along the same path as Jeffery (1989), Brownlee (1990) studied the interorganizational relationships between the Alberta Department of Education and each of the following: the ATA, the Alberta School Trustees' Association, the Conference of Alberta School Superintendents, the Association of School Business Officials of Alberta, and the Alberta Federation of Home and School Associations. The study sought to determine the effectiveness of these relationships. Brownlee identified several new dimensions--political activities, desire for autonomy, public awareness, and boundary spanning activities--as new conceptions to expand the conceptualization. Two of these, political activities and desire for autonomy, appear as potential variables that could be examined in this study.

The most recent study relating to IOR was undertaken by Inskip (1992). However, unlike the previous works discussed above, she studied one particular aspect of interorganizational interaction; namely, the planning and facilitating of interorganizational collaboration among human service organizations. Using the case study methodology, Inskip observed the work of two human service organizations: a women's health center located in a city and a library system located in a rural area. In each of these organizations she identified a series of critical incidents that she termed " 'freeze frame' pictures of a dynamic and complex process" (p. 11). Amongst her findings, Inskip concluded that "strong personal leadership is critical for [the] development of planning networks" (p. 383).

Utility of the Review of Recent Research

The review of the recent research in the field of IORs was useful for a variety of reasons. First, the review showed that a majority of these studies used quantitative methodologies. Most employed or adapted Marrett's (1971) framework or the Organizational Assessment Instrument developed by Van de Ven and Ferry (1980). Where qualitative strategies were used, they were typically a follow-up on the initial findings of the quantitative component of the study. Second, the review also revealed that conclusions in relation to the relationship between the linkages and effectiveness varied. The researchers therefore advocated caution in the use of their findings by other researchers. Consequently, the present study utilized qualitative methodologies for the collection and analysis of the data. Thus, apart from Intriligator (1992), no other study of which the current researcher is aware has applied qualitative methodologies alone.

Third, several gaps have been identified in the recent research. For example, earlier studies have concentrated on describing dyadic relationships between two cooperating agencies or between a focal agency and member agencies. There has been little discussion of the relationships that exist in interorganizational networks. Consequently, this study has focused on investigating linkages in an interorganizational network to help provide useful data for future comparisons. Another apparent omission in the literature is the analysis of conflict and its effect on IORs. Interorganizational conflict was included in this study to test some of the ideas about conflict and its resolution that were drawn from the writings and theorizing about interorganizational conflict.

In general, the literature reviewed has provided the wide lens for this study. It is also a backdrop against which the findings of this study are discussed.

Summary

In this review of the literature pertaining to interorganizational linkages, the effort towards a conceptualization of interorganizational relationships is described. The review identified five factors that may contribute to the emergence of interorganizational linkages: resource acquisition, protection from the environment, opportunity for growth, mandate, and power and control. Four forms of interorganizational linkages were also identified; namely, pairwise or dyadic IOR, interorganizational sets, interorganizational networks, and actions sets. From the review of the literature a framework containing six dimensions--general environmental characteristics, situational factors, structural factors, process dimension, effectiveness of the linkages, and conflict--was developed for interorganizational linkage analysis. Finally, in the last part of this chapter, the most recent research on interorganizational relationships is reviewed to highlight the research methodologies that were used and the resulting findings. This review revealed that quantitative methodology had been the primary data source for these research. Qualitative methods were employed as secondary data source. In the next chapter, the research method for this study is detailed.

CHAPTER 3

THE RESEARCH METHOD

The purpose of this chapter is to outline the research method followed in this study of the interorganizational linkages between and among the NDOE, the TSC, and the PDEs. Because this study applied purely qualitative methods in the collection and analysis of the data, a rationale for adopting qualitative methodology is presented first. This is followed by descriptions of the actual research instruments and the strategies that were employed in the data collection phase. In part 3 a brief report of the pilot study is presented. Part 4 describes the study setting, including the selection of participants. In part 5 the data analysis stages are discussed, followed by a description of the data presentation strategy. In the last part, ethical considerations are outlined.

Framework for Data Collection

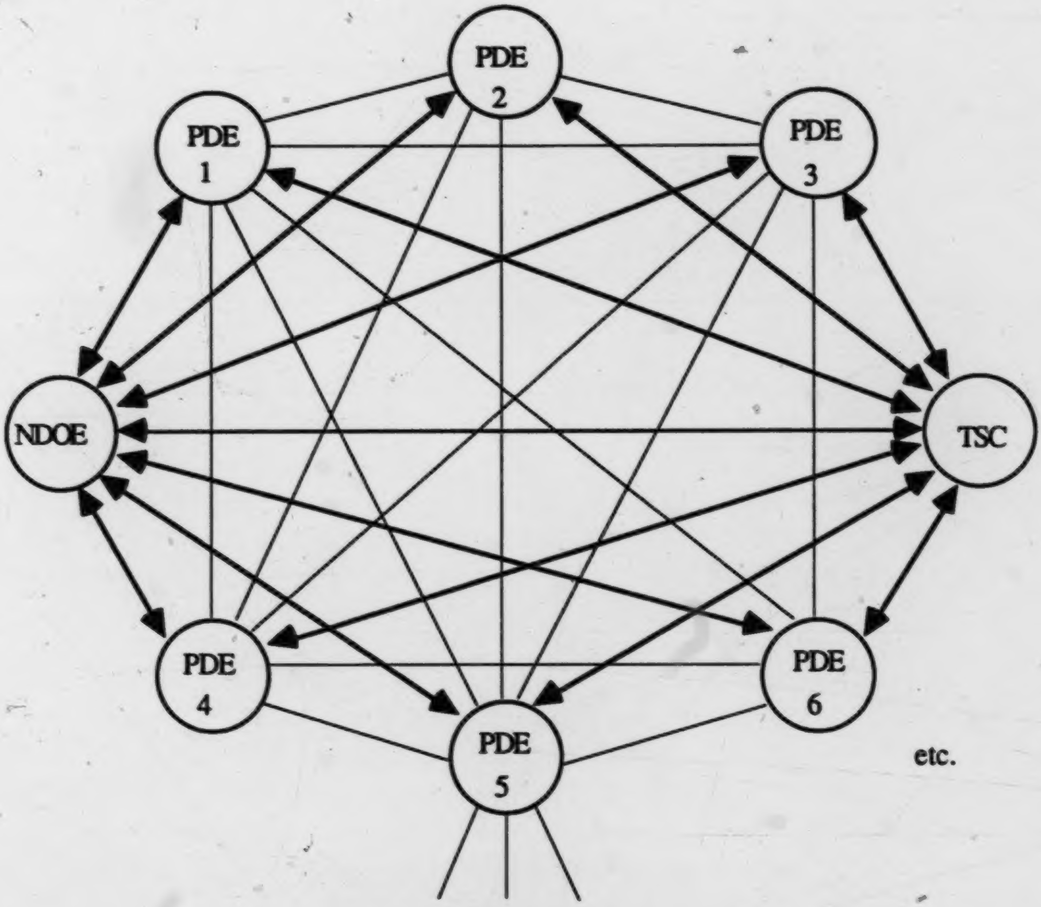
The following "spider web" (Figure 3.1) was designed to focus data collection. The dark lines with arrows on both ends show the interorganizational linkages emphasized in the study. The light lines indicate potential relationships for communication and resource exchange among the PDEs and between the PDEs and the provincial high schools. In reality, some of the PDE-PDE communication/resource exchanges are more frequent than others. Some are rare or nonexistent. The study did not focus especially on any of these.

The Rationale for Qualitative Methodology

Much of the research on interorganizational linkages has been carried out using positivistic approaches such as employment of questionnaires only and in a few cases a combination of questionnaires followed by interviews. These approaches, however, have failed to come up with a general framework of analysis that could be applied in all interorganizational studies. One partial reason for this state of affairs is that the prevailing positivist conception of science may not be suitable to the reality of interorganizational relationships, for as Zeitz (1980) advanced:

> Interorganizational relationships are characterized by tremendous variety, pervasive change and conflict, the presence of a great number of confounding variables and especially for the propensity for some organizations to socially construct their own environment. In contrast, the positive idea of science, as promulgated in many social science textbooks . . . suggests the importance of locating stable patterns of behavior and of formulating general theories that apply regardless of particular

circumstances. In particular, positivism stresses the independence and externality of the social world from the researcher. (p. 72)



Provincial High Schools

Figure 3.1. Conceptual Framework for Data Analysis

Just as organizations reflect the interactions of the human beings that work in them, so do interorganizational relationships. Because interorganizational relationships are characterized by tremendous variety, this researcher assumed that qualitative approaches were more likely to produce the unique characteristics of IORs in a particular setting. As Merriam (1988) postulated, in qualitative research "the paramount objective is to understand the meaning of an experience, . . . to understand how all the parts work together to form a whole" (p. 16). From this perspective the positivistic approach is limited in that researchers can observe only what is present; they cannot observe what has already taken place. Nor can they observe the hidden meanings in the behavior or the words of the participants. Similarly, Patton (1985) argued that the objective of qualitative or naturalistic research is to "understand situations in their uniqueness as part of a particular context and the interaction therein" (p. 1). He added:

> This understanding is an end to itself, so that it is not attempting to predict what may happen in the future necessarily, but to understand the nature of the setting, what it means for the participants to be in the setting, what their lives are like, what's going for them, what their meanings are, what the world looks like in that particular setting. This analysis strives for depth of understanding. (p. 1)

In a similar vein, Weber (1949) noted that such an understanding cannot be achieved without hearing from the person what the motives, intentions, or meanings were for a particular action or utterance. The qualitative study assumes that there are multiple meanings. The world is not an objective thing "out there" to be discovered, but a function of personal interaction and perception. This makes it necessary for the researcher to form close relationships with the researched in order to experience, to understand their lives, and to be influenced by their experiences.

Research Instruments

In qualitative study many methods are used to collect data (e.g., Yin, 1994, pp. 79-90). But according to Wolcott (1994), the three most commonly used methods are "participant observation (experiencing), interviewing (enquiring), and studying materials prepared by others (examining)" (p. 10). However, the selection of methods for qualitative research will depend on the nature of the phenomenon being investigated and the feasibility of each of the various methods at the time the research is being carried out.

In this study, four primary strategies were employed to collect data. The main strategy involved a semistructured interview, and the second primary strategy dealt with document analysis. The third primary strategy involved keeping a daily journal and a fourth strategy involved participant observation. Although participant observation is seen as one of the most common methods of qualitative data collection (Wolcott, 1994), the researcher did not think it would suffice for this particular study. It was thought that because the researcher would be on the research site for a period of up to four months only, it was possible that during that time no interorganizational meetings would take place. Thus, depending on this method would likely prove futile. Consequently, participant observation was identified as an opportunistic method for this research. In the actual data collection phase, however, participant observation was possible, as described fully later in this chapter.

The Semistructured Interview

Interviewing has several advantages over other methods in qualitative research. According to Bogdan and Biklen (1992), interviews may be used in two ways:

> They may be the dominant strategy for data collection, or they may be employed in conjunction with participant observation, document analysis, or other techniques. In all of these situations the interview is used to gather descriptive data in the subjects' own words so that the researcher can develop insights on how subjects interpret some piece of the world. (p. 96)

Similarly, Patton (1980) postulated the major advantage of employing interviews:

> We interview to find out from [the subjects] those things we cannot directly observe. . . . We cannot observe feelings, thoughts, and intentions. We cannot observe behaviors that took place at some previous point in time. We cannot observe the situations that preclude the presence of an observer. We cannot observe how people have organized the world and the meanings they attach to what goes on in the world -- we have to ask people questions about those things. The purpose of the interview is to allow us to enter into the other person's world. (p. 196)

Patton (1980) described the advantages of interviews in initial data collection; Bosseti (1990), on the other hand, praised interviewing as especially important in the later stages of data collection. According to her, interviewing enables the researcher to "identify the themes that had emerged in earlier interviews [and mailed questionnaires] but still required further exploration in order to clarify and enhance understanding" (p. 43).

Three different types of interviews have been identified in the literature: structured, semistructured, and unstructured (e.g. Merriam, 1988; Miles & Huberman, 1994). Structured interviews are most useful for collecting common socio-demographic data from all respondents. Semistructured interviews are most useful when certain information, but not all, is required from all respondents. Thus interviews are guided by a list of questions or issues to be explored. Unstructured interviews, on the other hand, tend to be used for exploratory purposes, when very little is known of the phenomenon being investigated.

In choosing the type of interview to adopt, Merriam (1988) suggested that researchers should "combine all three types of interviewing so that some standard information is obtained, some open ended questions are asked all participants, [and] some time is spent on unstructured mode so that fresh insights and new information can emerge" (p. 74).

The interview was chosen as the main data collection instrument for this research because the researcher believed that relationships that exist in interorganizational linkages can be best derived in their wholeness through people sharing their stories and experiences in their own words. Interviews made it possible not only for the participants to tell their stories in their own words, but also for the researcher to follow up on statements made by the participants to seek deeper understanding of the stories they were telling and clear up doubts in his mind. The follow-up interviews made it possible for the researcher to bounce off the new themes emerging from the responses of other participants and get responses that provided data on which the researcher could construct what he perceived to be the story that everyone was trying to describe.

The semistructured interview was selected as the most suitable method for two reasons. First, the phenomenon of interorganizational relationships has been investigated by others, and certain structures and issues have been identified for its continued analysis (e.g. Hall, 1987; Marrett, 1971; Van de Ven & Ferry, 1980). Thus it was useful to adapt those structures and issues for further investigation in different settings. Second, as far as the researcher was aware, only one of the past investigations, Mutema's (1981), had been carried out in a developing country. All of the other research and articles written on the subject have been completed in industrialized countries such as Canada and the USA. From these two perspectives, semistructured interviews provided the researcher not only with issues that could be studied and a framework within which this investigation might be conducted, but also with the leverage to pursue any new aspects of the phenomenon that arose from the perspective of the Third World experience. As Merriam (1988) argued in reference to semistructured interviews:

> Neither the exact wording nor the order of the question is determined ahead of time, and so the researcher is able to respond to the situation at hand, to the emerging worldview of the respondent, and to new ideas on the topic. (p. 74)

A semistructured interview schedule consisting of 21 questions, under four dimensions, was initially prepared for all the participants. All of the questions were open ended. This made it possible for the researcher to pursue any emerging themes that were perceived to be of use to the project. The questions were used as a guide, their order depending on such factors as the conduciveness of the interview environment and the responsiveness and knowledge of the interviewees in relation to IORs. After the pilot study the number of questions was reduced to 19. Two introductory questions were also added to collect data on the background of the participants (Appendix A).

All participants were interviewed and all interviews audiorecorded. The interviews took between 30 minutes and one-and-one-half hours. The length of the interview was determined mostly by the ability and the willingness of the participants to contribute. The semistructured nature of the interview schedule made it possible for the researcher to shorten the interview with those participants who, although willing to contribute, lacked understanding of the phenomenon being researched. The researcher did this on two occasions. Three interviews went on for over an hour. In these cases the participants talked freely without much prompting by the researcher. In two other cases the participants decided to submit written responses to the researcher; thus the interviews were shorter.

The audiorecorded interviews were summarized and returned to the interviewees for verification. The summaries also contained quotations that the researcher felt might be relevant for this study. The interview summaries were also studied by the researcher to identify issues that needed further clarification. Eighteen second interviews were conducted. During these second visits, where possible, these questions relating to the issues identified were asked and the responses audiorecorded as well. All interviews were later transcribed word for word to inform the data analysis that was undertaken by the researcher.

Document Search

Documentary data are a good source of information for qualitative studies. Guba and Lincoln (1981) suggested that information from official documents "lends contextual richness and helps to ground inquiry in the milieu of the writer" (p. 109). Ultimately, the strength of a documentary search lies in its ability to provide information about those things that cannot be observed directly. As Patton (1990) argued:

> Document data may reveal things that have taken place before the [study] began. They may include private interchanges to which the [researcher] would not otherwise be privy. They can reveal goals or decisions that might be unknown to the [researcher]. . . . They also provide stimulus for generating questions that can only be pursued through direct observation and interviewing. (p. 235)

Similarly, Marshall (1993) added that information from documents "can ground an investigation in the context of the problem being investigated" (p. 78).

The document search involved an examination of official documents including circulars, minutes of Senior Education Officers' Conference and PEB meetings, annual reports and instructions, determinations, the Secretary's Statements, Ministerial Statements, and government legislation. It was hoped that by searching through at least three to four years of records, the researcher would be able to form a fairly accurate perception of the effectiveness or otherwise of the IORs between and among the participating organizations. However, owing to logistical difficulties, the document search was mainly limited to the most recent years (1994 and 1995). A few of the official documents made available to the researcher dated as far back as 1975. Using the research questions as the initial starting guidelines, the researcher studied the documents for evidence of cooperative interaction, coordination, conflict and conflict resolution, as well as resource and information flows and the frequency in that they were exchanged.

The Journal and Fieldnotes

The journal and fieldnotes, according to Bogdan and Biklen (1992), are a written account of what the researcher hears, sees, experiences, and thinks in the course of "collecting and reflecting on the data in a qualitative study" (p. 107). According to these writers, there are two kinds of fieldnotes:

> The first is descriptive, in which the concern is to capture a word-picture of the setting, people, actions, and conversations as observed. The other is reflective -- the part that captures more of the observer's frame of mind, ideas, and concerns. (p. 108)

In this study the researcher made both types of fieldnotes as opportunities arose. He recorded daily in his journal the interactions with participants either face-to-face or through telephone contact and the "gut feelings" of the researcher, as well as the comments and remarks made by people who had experience with the operation of provincial high schools. Where possible, the key issues and themes arising from the journal notations were discussed with the relevant participants for verification or clarification. Additionally, these notes acted as the basis for formulating further interview questions.

Observation of Meetings

Merriam (1988) recommended that observation, as a data collection technique, should be used when "an activity, event, or situation can be observed first-hand, when fresh perspective is desired, or when participants are not willing to discuss the topic under study" (p. 89). Two meetings were observed. The first was the Senior Education Officers' Conference and the other the annual Ratings Conference. The Senior Education Officers' Conference was attended by all the Provincial Assistant Secretaries of Education as well as senior officials from both the TSC and the NDOE. The Ratings Conference was attended by the same people who were at the Senior Education Officers' Conference but also included the Secondary Inspectors and the Senior Primary Inspectors. During these two meetings the researcher made notes on the setting, the participants, activities and interactions, frequency and duration of discussions, and subtle factors such as informal and unplanned activities including after-hours conversation around the meeting venue.

The observations recorded focused particularly on the tone and length of discussion of interorganizational linkage issues. Attention was paid to who was doing most of the talking, who was implicated in the issues, what the underlying issues were, and what the outcomes of these discussions were. When the opportunity arose, private discussions of the issues noted were held with individuals who appeared to be most concerned. These discussions were helpful in elaborating or clarifying notes that the researcher made.

Dependability and Confirmability

Dependability, according to Guba and Lincoln (1981), is the requirement that

> the work of one evaluator (or team) can be tested for consistency by a second evaluator or team, that after examining the work of the first, can conclude "Yes, given that perspective and those data, I would probably have reached the same conclusion". (p. 124)

Thus, dependability is concerned with the acceptability of the process of inquiry to an external auditor. Confirmability, on the other hand, deals with the product of the research. Lincoln and Guba (1985) stated that confirmability is established by an "external auditor" who examines the product of an inquiry (i.e., data, findings, interpretations, and recommendations) and attests that it is supported by data that are internally coherent.

Efforts were made throughout the research process to ensure the dependability and confirmability of the process and the research outcomes. This involved prolonged engagement with subjects, persistent observation, triangulation of data, participant or member checks, and peer debriefing.

Transferability and Credibility

According to Lincoln and Guba (1988), transferability refers to the "extent to which the case study facilitates the drawing of inferences by the reader that may have applicability in his or her own context or situation" (pp. 20-21). However, Miles and Huberman (1994) argued that qualitative research products have limited transferability. Nevertheless, in order to assure transferability, a *purposive sample* of individuals who interact regularly with other organizations in the network was selected to participate in this study. It was anticipated that owing to their interaction in the interorganizational networks the responses of the participants would provide relevant experiences for this study. Further, thick descriptions of informants' contexts are provided for the reader to make comparisons with their own situations. As Lincoln and Guba (1985) observed:

> The naturalist inquirer cannot specify the external validity of an inquiry; he or she can provide only the thick description necessary to enable someone interested in making a transfer to reach a conclusion about whether transfer can be contemplated as a possibility. . . . The naturalist inquirer is responsible for providing the widest possible range of information for inclusion in thick description. (p. 316)

Guba and Lincoln (1988) described credibility as the degree to which the data and the interpretation of the investigator are similar to the "multiple realities in the minds of the informants" (p. 84). They listed several measures to enhance credibility, two of which were applied in this research: (a) peer debriefing to test insights and receive advice as the study evolved, and (b) interview checks with interviewees "whereby data and interpretations are continuously checked with [participants]" (p. 84). This continuous interaction helped to reduce misinterpretation and researcher bias. Peer debriefing was carried out with a fellow doctoral student who was carrying out his study at the same time.

Reliability of the Data

In order to improve the reliability of the data collected, multiple means of data collection were employed as outlined above. Denzin (1970) argued that triangulation of methods is necessary because "the flaws of one method are often the strengths of another, and by combining methods, observers can achieve the best of each, while overcoming their unique deficiencies" (p. 301). Triangulation, however, does not necessarily lead to confirmation of data as popularly advocated by Guba and Lincoln (1981). For in qualitative studies, truth is not out there to be discovered. It has to do more with what Mathison (1980) suggested. According to her, triangulation can result in the confirmation of data as well as the disconfirmation of data. Subsequently, it allows the researcher to seek explanations for inconsistencies or contradictions that may result from the use of multiple methods. She argued:"

> The value of triangulation is not as a technical solution to data collection and analysis problem, it is a technique that provides more and better evidence from which researchers can *construct meaningful propositions* about the social world. The value of triangulation lies in providing evidence such that the researcher can construct explanations of the social phenomena from which they arise" (p. 15).

Mathison (1988) went on to say that triangulation will result in a "phantom image" of a single proposition. But when this occurs, we do not throw up our hands and give up. Rather, she said:

> We attempt to make sense of what we find and that often requires embedding the empirical data at hand with a holistic understanding of the specific situation and

> general background knowledge about this class of social phenomena. This conception shifts the focus on triangulation away from the technological solution for ensuring validity and places the responsibility with the researcher for the construction of plausible explanations about the phenomena being studied. (p. 17)

The following processes were employed to improve the trustworthiness of the data. Each recorded interview was summarized, the researcher taking care to ensure accuracy. This was partially accomplished by including direct quotations from the interviews. In most cases, the summaries of the interviews were returned to the interviewees in person for verification. Only in eight cases were the summaries of the interviews sent to the participants by mail. In each of these cases the participants were not from two provinces originally specified and hence could not be contacted in person. Each summary was accompanied by a covering letter advising the interviewee that unless information to the contrary was received by a certain date, the summary would be taken as a true interpretation of the interview. It was not possible, during the data collection phase, to transcribe fully any of the interviews for the participants' perusal and/or confirmation. Because of logistical problems, transcription of the interviews took place much later. In all cases the researcher also read through the summaries and made note of the key issues that, in his view, had been missed or needed further elaboration. These were presented to the interviewees for clarification as well as elaboration. Finally, selected quotations of interviewees' words were returned to the respective individual participants for further verification. In order to improve credibility, permission was obtained from the participants to relate their words to the positions they held at the time of the interviews.

Pilot Study

A pilot study with three participants was conducted to check the feasibility of the strategies, processes, and the instruments that were to be applied. Originally, one participant each was selected randomly from the NDOE, the TSC, and the Central Province Division of Education (PDE). Each pilot study participant was informed by letter three weeks in advance that he or she had been randomly selected for pilot testing the research instruments. Each was advised that participation was voluntary; consequently he or she was free to decline the invitation. The letter also made clear that selection was based on the positions that they held in their respective organizations. The day before the interview the researcher checked with each of the pilot study participants to reconfirm the appointments. This arrangement worked out with two of the organizations; it did not, however, work out with the participant from the PDE of the Central Province. When the researcher made a call at the appointed time, the pilot study participant from the Central Province PDE was not present. A second appointment was made with the person when he arrived much later. But yet again this appointment was not kept by the participant. Given the time limitations, the researcher chose another participant who was very willing to take part.

Pilot testing a research methodology and its accompanying instruments requires that the report of the pilot study comment on the suitability of the instruments of data collection, data process, and its presentation. In other words, the pilot study can be taken as a mini study. However, given the time constraints faced by the researcher, pilot testing was focused on testing the research processes and the instruments only. The pilot study therefore focused on estimating the possible effects of the micro-cassette recorder, the interview schedule, data collection strategies, the data collection processes, the data analysis forms, and the willingness of the participants.

In particular, the pilot study had two main objectives. First, the researcher had been away from the country for over two years by the time the research was undertaken. The pilot study therefore provided an opportunity to test the appropriateness of the interview questions. It also tested the feasibility of the methodology. It allowed the researcher to get a sense of the participants' willingness or otherwise to discuss issues raised and of the difficulty of the exercise. The pilot study also allowed the researcher to become sensitive to the participants' reactions and feelings towards his presence as well as their reactions to the interviews being recorded. It enabled the researcher to become more aware of how his behavior might be appropriately adjusted towards the participants in order to reduce the negative impacts it might generate. Furthermore, the pilot study allowed the researcher to gain a more practical sense of the process and the time it would involve. It was very useful in informing the researcher of the feasibility of the research methodology, the data collection strategies and processes, and the data analysis forms. It enabled the researcher to obtain a good understanding of the difficulties in doing qualitative research in a society where modern technology is not readily available. This knowledge made it possible for the researcher to amend his approaches accordingly.

The Study Setting

This study was carried out in several settings. The NDOE, the TSC, and one Provincial Assistant Secretary of Education are located at Port Moresby. The PDE that provided multiple participants is located on an island north of Port Moresby. The annual Ratings Conference was held in Port Moresby as well. The Senior Education Officers' Conference, on the other hand, was held in another center (Lae) that necessitated air transportation to reach it. The other Provincial Assistant Secretaries of Education and officials were contacted and interviewed at Lae, the site of the Senior Education Officers' Conference. One Secondary Inspector was interviewed in Port Moresby during the annual Ratings Conference. The research site selection criteria are described next.

The Research Site Selection

The rationale for selecting the NDOE, the TSC, and the PDEs for this study has been previously outlined. In this section the rationale for the selection of participants from PDEs is described.

Papua New Guinea is divided into 19 provinces and two administrative districts. For educational purposes each of these provinces and the two districts have an education unit called the Provincial Education Board (PEB) in the case of provinces and the District Education Board (DEB) in the case of the two districts. Originally, it was judged uneconomical if not impossible for the research to accommodate more than two PDEs. Consequently, two PDEs were selected using the following criteria:

1. It was useful to compare whether the distance from both the NDOE and the TSC had any influence on the frequency and the quality of IORs. Thus, one PDE in proximity to the NDOE and the TSC, and another that is some distance away were selected for this study.

2. One PDE was seen to be progressive and innovative in educational development, whereas the other was considered to be more traditional.

3. The study had been planned so that it could be completed within the financial constraints of funding available to the researcher.

Based on these criteria, the East New Britain Province PDE and the Central Province PDE were selected. The former has the best transition rates from community school (i.e., primary schools) to provincial high schools, it has been a leader in experimenting with alternative education such as the *Tok Ples Skul* (local language schools) and compulsory secondary schooling. It is a long way from Port Moresby and had inexpensive but comfortable motel accommodation as well as easy access to the office from the motel. Central Province, in contrast, is the closest province to Port Moresby. Its central offices, including the PDE, are in Port Moresby as well. It is not a progressive province as far as educational innovation and development are concerned. Because the University of Papua New Guinea, from which the researcher operated, is also in Port Moresby, minimal extra financial resources would be required to access the Central Province PDE. However, during the data collection period it became possible to include Provincial Assistant Secretaries of Education and other officials from four other provinces, as elaborated upon below. Consequently, only the Provincial Assistant Secretary of Education in the Central Province PDE participated in the study.

Selection of Participants

Interorganizational interaction and linkage involve people in positions of authority. Thus, the participants in this study were those who were involved in or oversaw the operation of provincial high schools. They were people who occupied positions in their respective organizations that required them to interact with similarly placed individuals in other educational organizations. Therefore, this study employed a purposive sample. At the NDOE level all officials whose designations were assistant secretary or above, as well as superintendents, the senior professional assistant, provincial high schools, and two secondary inspectors whose role descriptions included tasks related to the operation of provincial high schools were invited to participate in this study. In all, 21 officials were invited. Of these, 16 participated, including the National Secretary of Education; Deputy Secretary for Standards; Deputy Secretary for Administration; First Assistant Secretary, Curriculum and Standards; First Assistant Secretary, Special Education Services; First Assistant Secretary, Policy, Planning, and Evaluation; Assistant Secretary for Policy, Planning, and Evaluation; Assistant Secretary for School Administration and Liaison; Assistant Secretary, Inspections and Guidance; Superintendent of Inspections; Superintendent of Curriculum; Superintendent of Guidance and Counseling; Superintendent of Staff Development Unit; Senior Professional Assistant, Provincial High Schools; and two Secondary Inspectors stationed in the Provinces.

From the Teaching Service Commission the participants were to include the Commissioner, the Associate Commissioner for Policy, the Associate Commissioner for Operations, the Legal Advisor, and the Coordinator of Appointments. At the provincial level, the participants were to include the Provincial Assistant Secretary, the Deputy Assistant Secretary, the Provincial Administrative Officer, the Finance Officer, and the Appointment Officer.

On arrival at the research sites the researcher learnt that in three of the sites, the NDOE, the TSC, and the East New Britain PDE, new organizational structures were in place, necessitating changes in the research clientele. The NDOE structure had created a second position at deputy secretary level and a fourth position at the first assistant secretary level. The TSC, on the other hand, had changed the titles of some of its officials. For example, the titles of the Commissioner and Associate Commissioners were abolished and replaced by a three-person Commission each of whom was called *commissioner*. Further, the position of Coordinator of Appointments was replaced by Inspector of Appointments. In the East New Britain PDE two positions at superintendent level were created to replace the position of the deputy assistant secretary.

The occupants of the new positions in each of these organizations, whose roles and functions were relevant to the operation of provincial high schools, were invited to participate in the study as well. Further, participation at the Senior Education Officers' Conference and the annual Ratings Conference made it possible to include four more Provincial Assistant Secretaries of Education, one Senior Professional Assistant, and a Secondary Inspector from other provinces. Given the richness of the data as a result of inclusion of these other participants and the limited time available to the researcher, it was decided to drop all other participants from the Central Province PDE except the Provincial Assistant Secretary of Education. In all, 31 participants took part in the study.

Access to the Research Sites and Participants

In order to obtain authority to carry out this research within the National Education System (NES) of PNG, this proposal was first approved by the research and publication committee of the Faculty of Education of the University of Papua New Guinea (UPNG). Second, approval was also gained from the NDOE research committee, which is responsible for research functions in the NES. Further, as a good public relations gesture, permission was also sought from the TSC and the PDEs selected. Consequently, letters of request were sent to the Teaching Service Commission Chairman and the two PDEs originally selected, seeking permission to carry out this study in those organizations. As a matter of courtesy all participants, with the exception of the Provincial Assistant Secretaries of Education, Professional Assistants, and one Secondary Inspector whose participation was co-opted at the Senior Education Officers' Conference or the Ratings Conference, were also contacted by means of a form letter seeking their cooperation and participation. The additional participants were approached in person and, after being briefed about the nature and the purpose of the study, agreed to participate.

At all times the researcher tried to do everything possible to minimize intruding into the daily activities of the participants. Thus, at each location the researcher spent the first couple of days familiarizing himself with the environment and getting acquainted with the participants and everyone else who worked there. During this period the initial contacts were made, the purpose and the content of the study were explained, and times were agreed to for interview sessions. The most important objective to meet during this initial contact period was to establish a conducive atmosphere for the interviews. This necessitated assuring the participants of their anonymity and informing them that their participation was voluntary and that, consequently, they were free to withdraw at any time. The researcher considered this exercise to be most important because, as Lincoln and Guba (1988) advised:

> Getting and/or winning the trust of the participants is a developmental process to be engaged in daily: to demonstrate to the respondents that their confidence will not be used against them; that pledges of anonymity will be honored; that hidden agendas, whether those of the investigator or of other local figures to whom the investigator may be beholden, are not being served; that the interests of respondents will be honored as much as those of the investigator; and that respondents will have input into, and actually influence, the inquiry process. (p. 303)

Data Analysis

The data collection period lasted a total of three-and-one-half months. Because considerable distance was involved, and time was limited, the data analysis was done in two phases. Phase one of the data analysis took place during the data collection phase. Miles and Huberman (1994, pp. 50-88) described several data analysis techniques that can be applied in the early stages of the research; that is, during the data collection phase. One of these, the "Contact Summary Sheet," was employed during this phase (Appendix B).

Immediately after each interview session, the researcher recorded in the journal what he thought were the main interorganizational linkage issues resulting from that particular interview. Each recorded interview was replayed as soon as possible after the interview and summarized. The researcher replayed the recorded interview several times, in tandem read through the summaries, and noted the following on a Contact Summary Form: (a) what main themes or issues came out of that interview; (b) which research questions and variables in the initial framework the interviewee responded to most centrally; (c) what new hypotheses, speculations, or hunches about the field situation were suggested by the interviewee; and (d) where the researcher should place the most energy during the next contact, and what kinds of information should be sought.

Also during the data collection phase, preliminary analyses of all documents available were made following the interview guide. Special attention was placed on triangulation of the themes that were generated through the interviews. Further, new themes arising from these documents were noted for discussion with participants.

The journal notes were also read through, and key ideas and themes arising out of them were summarized. Where possible, these impressions that the researcher formed were discussed with interviewees for verification or otherwise. The data analysis during the data collection period provided an opportunity for the researcher to verify and clarify all data collected, to formulate further interview questions for investigation, and to fill in any gaps and omissions that became obvious. All subsequent verbal interactions with the participants were also audiorecorded, transcribed, and treated in the same way as the initial interview.

The second phase, the post-data-collection phase, took place after all the interview data had been collected and transcribed. First, the documents were read a second time and pertinent data noted for both triangulation and anecdotal explanations. Second, the journal and the observational notes were analyzed and categorized. Then using the research questions as the starting guidelines, the researcher read through all the data and coded relevant issues and themes under each group of research questions and category of participants using an initial starting list of codes. This list of codes expanded as more themes and issues became apparent in the data analysis (Appendix C).

Data Presentation

Three forms of data presentation in qualitative enquiry -- (a) description, (b) analysis, and (c) interpretation -- have been proposed by Wolcott (1994). He described each of these as follows:

> *Description* addresses the question, 'What is going on here?' Data consist of observations made by the researcher and / or reported to the researcher by others. *Analysis* addresses the identification of essential features and the systematic description of interrelationships among them -- in short, how things work. In terms of objectives, analysis also may be employed evaluatively to address the questions of why a system is not working or how it might be made to work 'better.' *Interpretation* addresses the processual questions of meanings and contexts. 'How does it all mean?' 'What is to be made of it all?' (p. 12)

In this study description and analysis were employed to present the findings. The discussion of the findings was guided by the framework depicted in Figure 3.2. The data from the various sources were analyzed carefully to single out some things as worthy of note and relegate others to the background. Great efforts were made to "stay [as] close [as possible] to the data as originally recorded" (Wolcott, 1994, p. 10). The final account drew on the field notes as well as taking excerpts from the interviews in the respondents' own words so that they seemed to tell their own stories. According to Wolcott (1994), the strategy of this approach is "to treat descriptive data as fact. The underlying assumption, or hope, is that the data 'speak for themselves'" (p. 10).

The analysis of the data was built on the description made earlier. The purpose was "to expand and extend beyond a purely descriptive account" (Wolcott, 1994, p. 10). The analysis therefore focused on identifying key factors and relationships in the IORs between and among the participating organizations. From these, recommendations were made for the improvement of the interorganizational relationships with respect to the operation of provincial high schools.

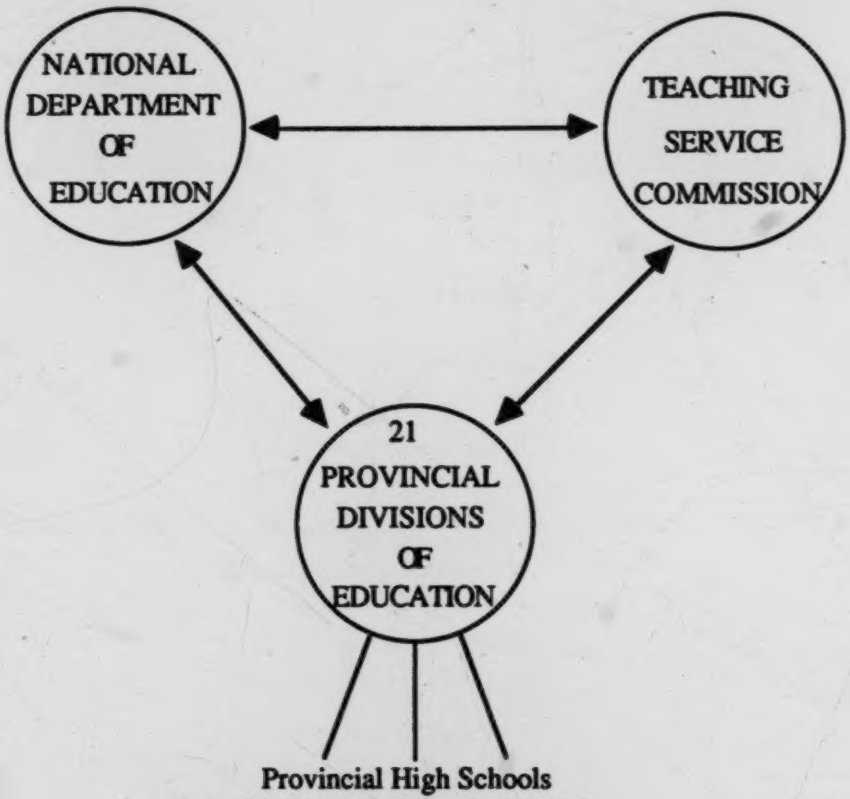

NATIONAL DEPARTMENT OF EDUCATION
TEACHING SERVICE COMMISSION
21 PROVINCIAL DIVISIONS OF EDUCATION
Provincial High Schools

Figure 3.2. Framework for data analysis.

Ethical Considerations

Ethical considerations are critical in studies involving human beings, for they allow some degree of guarantee for the security, integrity, and anonymity of the informants. Thus this proposal was submitted to the respective ethics review committees of the Department of Educational Administration of the University of Alberta and the Faculty of Education of the University of Papua New Guinea. The former is the supervising institution for this research, and the latter is the funding agency. This proposal met the ethical requirements of the two institutions.

As indicated earlier, each participant was either contacted by letter or by word of mouth inviting him or her to participate in this study. Participants were assured of their anonymity and advised that their participation was completely voluntary and that they would have the right to refuse to respond to any of the interview questions. This assurance included informing them that their contributions would be used by this researcher to produce a thesis. The researcher at all times reminded himself not to impose his presence on the participants, but to fit in with their schedules and environment while at the same time ensuring that the validity and reliability of the research effort was not compromised.

Summary

This chapter discussed the research method that was employed in this study. The chapter began with a justification for employing qualitative methodology in this study. It pointed out that IORs are characterized by tremendous variety, pervasive change, and conflict. Consequently, IORs could be best researched through qualitative study. Thus, in this study, only qualitative methodologies of interview, participant observation, document analysis, and journal keeping were employed. The chapter also presented the steps taken to assure dependability, confirmability, transferability, credibility, and reliability of the data. Part of this process involved pilot testing the interview schedules and the contact summary form. This was followed by a description of the study setting, describing in detail how the participants were chosen, who participated, and where they were located. Finally, the processes of fulfilling the ethical requirements were stated. In the next chapter the contextual dimension under which interorganizational linkages are played out is discussed and analyzed.

CHAPTER 4

CONTEXTS OF INTERORGANIZATIONAL LINKAGES

In studying the contextual dimensions of interorganizational linkages, the analysis is often focused on the general environmental characteristics (Hall, 1987) and situational factors (Van de Venn & Ferry, 1980). This analysis allows the researcher to understand the social and the legal contexts in which interorganizational linkages are formed and take place (Hall, 1987). This understanding should then enable the researcher to identify the climate and the preconditions that are conducive to interorganizational linkages (Hohomann, 1985).

The purpose of this chapter is to describe and analyze the legal, political, and the social contexts under which interorganizational linkages take place between and among the National Department of Education (NDOE), the Teaching Service Commission (TSC), and the Provincial Divisions of Education (PDEs) in Papua New Guinea (PNG). This chapter addresses the first research question:

> **What are the legal, political, and the social contexts for the interorganizational linkages associated with the operation of provincial high schools?**

The information sources for this chapter were the interviews conducted with relevant respondents in PNG and government documents, including statutes, minutes of meetings, and government circulars. The chapter is presented in 5 parts. In part 1 the political and legal contexts for the IORs among these organizations are outlined. This is followed by a discussion of the interdependencies between and among these organizations for services and resources in part 2. In part 3 the boundary spanners are identified. In part 4 consensus-dissensus relating to the delegated functions is described. In the final part the chapter findings are summarized.

Legal, Political, and Social Contexts for Interorganizational Linkages

In 1970 the Territory of Papua and New Guinea Education Act was passed by the House of Assembly. This act allowed for the establishment of District Education Boards (DEBs). The DEBs had some specific powers delegated to them, but in other functions they were allowed only an advisory role. In 1971 the Teaching Service Act was enacted. This act provided for the establishment of the Teaching Service Commission, which became responsible for determining the terms and conditions of service of teachers. A number of factors contributed to the decentralization of some of the educational authority in PNG. Smith (1975), for example, argued that at the time the National Education System (NES) was being proposed, mutual suspicion existed between the churches, that controlled most of the schools, and the administration. It was in "both parties' interest, therefore, to locate substantial powers in district and local levels that would be widely representative, open in their conduct and responsive to local opinion" (p. 81). Bray (1984), among other reasons, argued that educational decentralization in PNG also permitted the government to require a considerable resource contribution to education from the churches and the village communities. For example, in community (primary) schools, the community in which the school exists is responsible for the building and maintenance of the school's physical facilities and staff housing. In 1975 PNG gained its political independence. At about the same time moves were made by several affluent districts, now provinces, to break away from the rest of the country and become independent nations. As a result of this threat of secession, the Government of Papua New Guinea passed the Organic Law on Provincial Government in 1977 (Government of Papua New Guinea, 1977). Under the provisions of this Organic Law, Provincial Governments were established. With respect to the provision of education, the Provincial Governments were granted primary responsibility for "primary schools and primary education other than the curriculum" (p. 7) and concurrent responsibility for the provision of secondary education. By 1980, all of the former districts gained Provincial Government status. Subsequently, the 1970 Act was superseded by the 1983 National Education Act, which changed the DEBs to Provincial Education Boards (PEBs). The PEBs and the PDEs became part of the Provincial Government structure and hence answerable to it. In 1988 the new Teaching Service Act was passed to cater to the changes in the political development in the country.

The Education Act of 1983 divided the functions for the provision of education between the National and Provincial Governments. Under the provisions of the Education Act of 1983, and with respect to the provision of provincial high school education, the NDOE is the executive and inspectorial branch of the National Education System (NES). In this capacity it is responsible for the following: the determination of the provincial high school curriculum and the overall supervision and evaluation of the same, determining the qualification and the standards required for the registration and provisional registration of teachers, the inspection of all schools and the certification and assessment of teachers, the supervision of the implementation of approved plans and policies in relation to education, and the disbursement and the supervision of the expenditure of money lawfully made available for the purpose of education by the National Government.

The PDEs are the administrative units created by the Provincial Governments to implement the educational policies made by the PEBs. The functions of the PEBs under the provisions of the Education Act of 1983 and the Teaching Service Act of 1988, among others, are the following: in consultation with the local-level government bodies and education agencies in the province, to draw up and submit for consideration of the National Education Board (NEB) plans for the establishment and development of schools in the province; to supervise the carrying out of approved plans in relation to education in the province; to hear and determine appeals in the cases where the governing body of a school expels a student; and with due regard to the expressed wishes of the teachers and education agencies concerned to have such responsibilities in regard to appointment, promotion, transfer, and discipline of teachers who are members of the Papua New Guinea Teaching Service. The PDEs are also responsible for budgeting for teachers' salaries and the delivery of the pays to all the provincial high school teachers serving in their provinces.

The TSC, under the provisions of the Papua New Guinea Teaching Service Act of 1988, is the employer, on behalf of the State, of all the teachers, including those who teach in provincial high schools. In this capacity the TSC is responsible for the following: critically overseeing all matters relating to the terms and conditions of service and the welfare of members of the Teaching Service; ensuring that decisions of other education authorities under the Teaching Service Act of 1988 or the Education Act of 1983 do not infringe upon or abrogate the rights or the conditions of service of members and, where those rights are infringed or abrogated, to give direction or take action necessary to correct the situation; and after consultation with the Secretary of the NDOE, to determine conditions for granting free-place study (at full pay) in the institutions outside or inside the country, study leave and inservice training of members of the Teaching Service.

Summary

Scrutiny of the above distribution of roles and functions will show that these organizations have independent and concurrent functions. As Songo (1978) stated, the spirit of the Education Act "is sharing power rather than acquiring absolute power. Different officials and different bodies are each given carefully delimited powers over a particular element of a particular function" (p. 277). Consequently, interorganizational linkages are necessary if functions are to be performed as required. In the next part, the interdependencies between and among these organizations for services provided or shared are detailed.

Interdependencies Among the NDOE, the TSC, and the PDEs

The nature of interdependence between pairs of organizations in this interorganizational network are different for each pair. In an effort to capture the total picture as accurately as possible, separate sections have been created to present the findings.

Interdependency Between the NDOE and the TSC

Interorganizational linkages between the NDOE and the TSC occur in regard to the matters relating to the teachers, who are members of the Teaching Service, teaching in provincial high schools. These include the registration of teachers, the processing of teachers' salaries, the inspection and the evaluation of the teachers' work, and teacher discipline.

In order for the NDOE to perform its functions relating to the curriculum development and curriculum implementations more effectively, it must be free of any responsibility for matters considered industrial issues. According to one high ranking official of the NDOE, determining the terms and conditions of service for teachers in the Teaching Service is a specialized function best performed by another body, leaving the NDOE to concentrate on the professional issues in education. In this sense the he saw the TSC as the appropriate body to take on this task:

> I think the TSC has a very useful function to look after; that is, the conditions of service of the teachers. It's a very specialized area. It's like a department of personnel management, for example, that looks after the conditions of service for the public servants. And I don't think the NDOE has the capacity to take it on, and therefore a separate body like the TSC is necessary. We, as the Department of Education, have a specific role. We don't want to get involved in setting the terms and conditions of teachers. It's better done by another organization. I think the TSC exists for that, and they should remain as they are. I think they maintain a very vital function. If you give it to the department, then it might divert it from basically professional issues that it should concern itself with. (ND-02)

In many ways some officials felt that the NDOE did not receive any services from the TSC. The TSC depends on the NDOE rather than provide services to it as the Assistant Secretary for Inspections and Guidance noted:

> I think we essentially provide services for the TSC. We carry out the assessment or appraisal of teachers for eligibility for promotions. We carry out the function of laying of charges of incompetence and misconduct for the TSC, and in cases where the TSC charges or want charges to be laid, we carry out the inspection and write a

> report. So, as far as the TSC is concerned, we carry out a lot of their activities on their behalf. (ND-03)

A senior official in the NDOE, in agreeing with the above, pointed out that under the provisions of the Teaching Service Act the TSC is responsible for the teachers' salaries and conditions of service. However, the NDOE was taking care of the function of processing teachers' salaries on their behalf (ND-04). The Superintendent of Secondary Inspections shared the fact that the Secondary Inspectors from the NDOE are also asked to be responsible for the inspection functions. Consequently, the TSC depends on the NDOE for inspectorial services to be provided to the teachers:

> [These include carrying out and writing] an immediate inspection report on a teacher to determine if the TSC should take discipline action on the teacher. Also in a case where a teacher who is deemed to have resigned or who has resigned and is returning to the teaching force, the Inspectors will write an inspection report on the . . . [teacher] for the TSC. (ND-14)

From the perspective of the TSC, compulsory interaction with the NDOE is necessary in relation to the TSC's responsibility to serve teachers as the employer. The TSC is a very small organization. It does not have the capacity or the facilities to process the teachers' salaries and carry out other activities pertaining to the employment and the management of teachers. According to a senior official of the TSC, the TSC depends on the NDOE to process the salaries of all teachers as well as to write the personal reports on teachers to determine their suitability for promotion or inspection reports for teacher discipline cases. In his words:

> Generally speaking, the TSC cannot operate without the aid of the NDOE, simply because many of the decisions we make here are administered by the various divisions of the NDOE. So in the light of that, we maintain a very close working relationship with the NDOE. (TS-02)

In agreeing with the views expressed by one of his colleagues above, the Chairman of the TSC emphasized the legislative framework under which interorganizational linkage takes place with the NDOE:

> According to the [education] laws the Education Department is the servicing arm of the system. . . . One of their important functions is to service us, meaning any decision we make the Department will implement. . . . So we rely on the department in a lot of ways: the calculation of salaries, paying of salaries, and so on. (TS-03)

From the perspective of appointment of teachers to provincial high schools, an Inspector with the TSC pointed out that his organization is interested in ensuring that all eligible teachers are appointed to teaching positions. The NDOE, through the School Administration and Liaison Division (SALD), has all the information and the facilities required to perform these tasks, so the TSC is dependent on the NDOE for this process. SALD knows exactly which high schools have vacancies and will be able to fit the members of the teaching service in them:

> SALD plays a very key role in upgrading the Master Position Register (MPR), and we want to make sure that they give us this information on regular basis so that we know exactly how many people we are dealing with, the number of positions we are creating, and so on. (TS-04)

Complementing each others' functions is probably the best way to describe the interdependency between the NDOE and the TSC. The First Assistant Secretary of Education for Standards in the NDOE contended that because the two organizations have the common goal of providing education to the children, they must cooperate with each other. He argued that for children to receive good education, "the NDOE needs the cooperation of the TSC just as much as the TSC requires the cooperation of the NDOE" (ND-16).

Interdependency Between the NDOE and the PDEs

Interaction between the NDOE and the PDEs with respect to the provision of provincial high school education is governed by the roles and functions each is required to play under the provisions of the Education Act of 1983. These roles and functions include the provincial high school curriculum policies and their implementation, the recruitment of expatriate teachers and the evaluation of the work of the teachers in the schools, the establishment of provincial high schools, and the general overseeing of the administration of the schools.

The NDOE depends largely on the cooperation of the PDEs to implement the national educational policies. This is because Provincial Governments own the schools and have the power to control their existence. They know the people and their culture in the province. They know the politics of the people and therefore are in a position to advise the NDOE accordingly. The NDOE's dependence on the PDEs for the implementation of national policies was well articulated by one high ranking NDOE participant. He contended:

> We rely a lot on the services of the PDEs. It is at the provinces where the action is and we rely a lot on their cooperation and their support for the successful implementation of the national education policies pertaining to provincial high schools. (ND-02)

To provide inspection and guidance services more effectively, the NDOE has located the Secondary Inspectors and the Guidance Officers at the provincial headquarters. Through mutual agreement the PDEs became responsible for finding housing for these personnel. There are two reasons why the provinces have taken on the responsibility for identifying and securing housing for these national officials. First, the provinces know their particular localities and the situations therein better; thus they know if houses are available and where they are located in the town. Second, the authorities responsible for allocating houses in the provinces are in the provincial capitals, and therefore it is more economical for the PDEs to approach these housing authorities than for the NDOE. Apart from locating and arranging for suitable housing for these national officials, the Assistant Secretary for Inspections and Guidance also singled out the actual services of the PDEs on which the NDOE depends to help it accomplish certain of its functions that are carried out by the field based national officials in the provinces. He said:

> We are dependent on them as well to a considerable extent. We sometimes use their vehicles, telephones, and their secretarial services. Although we are not exclusively dependent on them, for we do have our own budget for transport, materials and telephones, it is inadequate for our purposes, so we do depend on considerable provincial level of support in terms of resources. (ND-03)

As mentioned earlier, the provincial high schools belong to the Provincial Governments. Consequently, they have statistics on enrollment, staffing, and such other things as the status reports on the facilities available in the school and the general well-being of the schools. These statistics are critical to the NDOE for planning, budgeting, and reporting educational activities to the National Government. Furthermore, the NDOE is responsible for disbursing school subsidies; therefore, it needs the enrollment figures for this purpose as well. It is also responsible for recruiting teachers from foreign countries. Internally, the NDOE helps to coordinate a list of vacancies and a list of all teachers not attached to a position. This information is passed on to the PDEs that make use of it. According to the Assistant Secretary for SALD, Which is responsible for liaison with the PDEs, to accomplish all of these, the NDOE must rely on the PDEs to furnish the statistics it requires. In his words:

> We rely on the PDEs for statistics on enrollment figures and so on. But these still don't come, and that creates a lot of problems, not only for my division, but also for other divisions like the planning division. We rely on those figures to hand out subsidies and whatnot, but sometimes it is a stumbling block for this office. . . . The statistics we have on placement of teachers help us to identify the teachers who

> are unplaced and their location. We then pass this information on to help the provinces who are looking for teachers from other provinces. (ND-06)

The submission of accurate enrollment figures by the PDEs to the NDOE is also important for the calculation of school subsidies by the NDOE. Because these subsidies are calculated on a per-student basis, any PDE that fails to submit these figures or submits wrong figures can be penalized by not being allocated its rightful subsidies. There is also the possibility that lack of accurate statistics may also lead to over allocation of financial resources by the NDOE.

Inservice training for the teachers is an NDOE function, but the teachers are employed by the PEBs. To attend inservice training, teachers must be released from their teaching positions. Thus the PDEs are expected to cooperate by releasing teachers without their losing job security. The Superintendent of the SDU pointed out that "the PDEs are supportive of the SDU by making sure that the teachers are released from their teaching positions" (ND-08). Further, the lack of financial resources from the NDOE in the last few years and the importance and emphasis a Provincial Government places on education have prompted some PDEs to take on part of the responsibilities for inservice training of teachers. These PDEs know what kind of training is required for the teachers in their schools. These provinces have supported the teachers by sending them on short courses outside the provinces as well as mounting short inservice courses within their province.

The PDEs also depend on the NDOE for a number of services. One of the major areas of dependence on the NDOE is educational planning. It has been evidenced, at least in the last 10 years, that the PDEs lack the capacity for educational planning and other related activities. And although these officials are part of the Provincial Department in which they work, they have not received any technical assistance or inservice training from these departments. Their training needs have been met by the NDOE. According to one senior official of the NDOE, "In planning and supervision we have taken on a lot of the responsibilities for training of the provincial educational planners" (ND-04) The First Assistant Secretary for Finance and Administration in the NDOE agreed, adding that the training of the provincial educational planners is necessary if the national educational plans are to be implemented. He outlined what has already taken place and what is yet to come in terms of assisting the provinces to come up with provincial education plans:

> We have brought in Regional Planning Officers and the Senior Professional Assistants for workshops on planning. Last year we had a workshop looking at the national education plan. We are planning another workshop next week. This will be a follow-up to the Senior Education Officers' Conference. This time they will be

> looking at elementary education as well as the Provincial Government reforms. (ND-07)

As the overall coordinator of educational development, the NDOE plays a supportive role in times of disaster. A Provincial Assistant Secretary of Education shared the importance of depending on the NDOE when educational services are disrupted by natural or man-made disasters. In this particular province the push for independence by some of the people has led to rebel activity, resulting in the disruption of educational services. Although many schools have been reopened in the last two years, it has been difficult to attract teachers for these schools. As the overall coordinator of educational development in the country, the NDOE becomes the source through which educational services in the provinces can be restored. The Provincial Assistant Education for Education of this province explained:

> We've been relying on the National Department of Education for a lot of things. One of them is finding teachers. The province is very short of teachers at the moment, and the School Administration and Liaison Division has been working closely with us, providing us with information about where teacher surplus is at the moment, and then we draw from there to fill our positions. Not only that, we still get a lot of things through the department, especially curriculum material and so forth. In terms of inservice courses, we still rely heavily on the National Department of Education. (AS-01)

The Secondary Inspectors, on behalf of the NDOE, act as advisors in specific matters relating to teachers, schools, and also in general terms in relation to secondary education. As illustrated in the statement by the Assistant Secretary for Inspections and Guidance, the Secondary Inspectors' services are not only needed by the PDEs for appointment decisions, but they are also needed by the PEBs for a number of other things such as the selection of teachers for inservice training and the delivery of school materials. He elaborated:

> [The Inspectors would] normally advise the PEB. They would not be formal members, but they would be on call. Some of them would always attend the PEB, but others would always be there to be called in to the meeting as needed. The PEBs are involved in the appointment of teachers to positions and selection of teachers for inservice training. The Inspectors would normally be called in to advise. With the delivery of materials, the Inspectors are always traveling to schools, so they would always take a certain amount of school materials and deliver them on the PDE's behalf. (ND-03).

Interdependency Between the TSC and the PDEs

Interactions between the TSC and the PDEs involve decisions relating to the creation of positions in new provincial high schools, the appointment of teachers to new and existing positions, and the oversight of the industrial activities of the teachers who are so appointed. Under the provisions of the Teaching Service Act of 1988 and with respect to the operation of provincial high schools, the TSC is the employer of all teachers. As such, it is responsible for the approval of the establishment of the teaching positions, the school hierarchies, and the levels of each of the positions in provincial high schools. The TSC is also responsible for overseeing the activities of the PEBs with respect to the appointment and discipline of teachers. The TSC ensures that teachers are dealt with within the law. The PEBs, on the other hand, are responsible for the establishment of new provincial high schools and new teaching positions. They are also responsible for the appointment of teachers to all teaching positions. The two organizations therefore depend on each other for teacher appointments to be carried out smoothly. Because of the delimited roles that these organizations must play in this function, it necessitates that the TSC and the PDEs work cooperatively with each other, as illustrated in the statement made by the Teaching Service Commission Chairman:

> With respect to provincial high schools, you have the Provincial Government that are actually directly responsible for building provincial high schools in the province. They appoint teachers and post them to schools. We supervise their actions by determining the procedures for appointment and their implementation. And really, we must work together. (TS-03)

One of the major interdependencies between the TSC and the PDEs concerns the securing of funds for new teaching positions. When new provincial high schools are built by the Provincial Governments, new teaching positions and the hierarchy of positions that are created must be approved by the TSC before the National Government can include them in the annual provincial budget allocation. An Appointment Officer of one PDE emphasized the need for the TSC to accept these recommendations, because failure to do so sometimes leads to difficulties in securing financial support for those positions and, consequently, the nonplacement of teachers. "The TSC must accept and endorse our recommendation for registration of new positions when they are created. If they are not approved by the TSC, it will sometimes be very difficult to get [money] to fund them" (EP-02). Similarly, the PDEs identified the need to consult and get approval from the TSC to upgrade positions and pay extra allowances to teachers, as shown in this statement by the Superintendent of Provincial High Schools in a PDE:

> For the upgrading of teaching positions, I have to consult the Teaching Service Commission for their approval. Also, I have to request them to approve any new allowance; for example, shift teaching allowance, that is one of the unique projects that only happened in this province. (EP-05)

The First Assistant Secretary for Special Education Services with the NDOE, in echoing the need for the TSC as the employer to approve structure of positions in provincial high schools, added that "it is also the appointing authority in regards to tenure appointments in all high schools" (ND-05). That is, the TSC has the final say on the awarding of positions to teachers on a tenure basis. It must therefore carry out this role in such a way that the needs of the provinces can be met. As highlighted later on in this chapter, the process of making appointment on tenure is contentious. The PDEs and the TSC do not always see eye to eye on the final decisions of the latter.

Another function in which the PDEs depend on the TSC is in the process of dismissal of teachers from the Teaching Service. As noted earlier, the TSC is responsible for determining and overseeing the terms and conditions of employment of teachers. Although the PEB takes all the discipline decisions and makes its recommendations to the TSC for endorsement, the dismissal function rests solely with the TSC. According to the PEBs, when all procedures are complied with, the TSC must endorse their recommendations and terminate teachers from the Teaching Service, but often this is not the case. Again this issue has become contentious, because the TSC appears to place emphasis on protecting the rights of the teacher, whereas the provincial authorities are more concerned with the protection of the rights of the children. This contention is discussed in more detail later on in this chapter.

From an administrative perspective, the Provincial Administrative Officer of a PDE said that because of the nature of responsibilities and the delegations under which administrative decisions must take place, continued dialogue and interaction with the TSC and the NDOE are necessary. She pointed out that there are certain decisions in regard to teachers' entitlements that only the TSC can take; for example, the retrenchment of teachers. In her words:

> The Provincial Secretary cannot approve that; it has to be approved by the TSC. Both the provincial divisions and the national department must come to an agreement before TSC can grant its approval. So if the provincial department approves this and the national department doesn't approve it, then TSC won't approve it. (EP-03)

Summary

The delimitation of powers and the subsequent establishment of the administrative structure have meant that interdependence is unavoidably regulated. Because different organizations are responsible for different aspects of a particular task and no one organization has the power to accomplish alone any of the functions, continued dialogue and interaction among the organizations are necessary because they complement each other for services and resources. The effective operation of the provincial high schools therefore depends on the good will of the operators to promote and foster interaction among themselves. Although this is the case generally, there is evidence that some of the organizations are not able to fulfill their obligations because of a lack of capacity and a lack of appreciation of the need to cooperate.

Boundary Spanning

In order to facilitate interorganizational linkages, the member organizations have boundary spanning units that deal with "the environments, and control the boundaries of an organization" (Das, 1990, p. 22). Serving in these units are persons who may be known as *boundary spanners*. In this context the boundary spanners are those officials in the organizations whose day-to-day responsibilities require them to deal with the external environment of the organization. In this part, an attempt is made to identify the boundary spanning units as well as the boundary spanners who serve in them. To a lesser extent, an attempt is also made to identify the nature of the interaction. The identification of boundary spanners in each of the organizations is accomplished through the identification of the officials or the persons through whom communication between and among these organizations is channeled.

This part is written from the perspective of each of the organizations with a view to capturing the similarities and differences between the boundary spanning activities of the individual organizations. The data for this part are derived mainly from interview questions that required each of the participants to indicate the person they approached or contacted most in the other two organizations with regard to the operation of provincial high schools. They are supplemented by data from the analyses of documents.

It is common under bureaucratic procedures for communication between organizations to be directed through the heads of the organizations. Thus, if the bureaucratic communication structures of these organizations were to be strictly adhered to, both the NDOE and the TSC would be required to communicate with the PDEs through the Secretary of the Provincial Department under which the PDE is created, whereas the NDOE and the PDEs would communicate through the Chairman of the TSC for matters relating to employment and dismissal of teachers. In relation to the NDOE, both the TSC and the PDEs would communicate through the National Secretary of Education. But this is not the case in the interorganizational communication between and among the NDOE, the TSC, and the PDEs, as told by the participants.

Boundary Spanning Between the NDOE and the TSC

The NDOE interacts with the TSC on matters relating to the terms and conditions of employment of teachers. Although the TSC is the employer of the teachers, the NDOE processes the salaries of the teachers and other related matters. The NDOE and the TSC also interact on matters relating to the registration of new teachers and the inservice training of serving teachers.

NDOE's boundary spanning with the TSC. Communication from the NDOE to the TSC can originate from several divisions within the NDOE. However, to whom the communications to the TSC are directed seems to be determined by the level of the hierarchy from which the communication originates. For example, the Assistant Secretary for SALD, who interacts regularly with the TSC, stated that "with the TSC, we mainly go to the two commissioners and not the chairman. The Chairman has a lot on his plate, so I think we liaise more with the two commissioners than the chairman" (ND-06). Similarly, the Superintendent of the SDU contended that when problems are encountered with the release of teachers for inservice training -- where the teacher is not released from his or her teaching position by the PDEs -- the SDU takes up the matters with the Teaching Service Commissioner for Legal Matters for interpretation of the Teaching Service Act and with the Teaching Service Commissioner for Operations for the release of teachers. He elaborated:

> With the TSC, the persons we deal with most are the Commissioner for Legal Matters and the Commissioner for Operations. We talk to the Commissioner for Legal Matters about what can be done to release teachers. Then there is the Commissioner for Operations, who has the responsibility of authorizing the release of teachers from their positions for the purpose of inservice teacher training. (ND-08)

At the top management level, one senior official of the NDOE contended that contact with the TSC is usually through the departmental head. "With the TSC, I would communicate more with the Chairman of the TSC" (ND-04).

Communication can also be enhanced by both the initiator and the receiver of communication having some personal knowledge of the other. The Superintendent for Inspections underscores the importance of knowing the person at the office with which one communicates as a plus for seeking and gaining greater understanding. He explained:

> With the TSC, I communicate well with the Commissioner for Operations. Being an ex-inspector, I know him well. He understands problems specifically because of his background as an Inspector. He answers our queries with a greater understanding than anybody else. (ND-14)

The TSC's boundary spanning with the NDOE. As with communication from the NDOE to the TSC, the TSC's interaction with the NDOE does not always follow the strict official channel. In practice the TSC communicates directly with the assistant secretaries and the salary section. For these administrative matters, it does not direct its communication through the National Secretary of Education. The Teaching Service Commission Chairman explained:

> On the formal level we would really communicate with the Secretary, like from the Chairman of the Commission to the Secretary, in the normal kind of department-to-department communication. But we find ourselves to be communicating more with the Assistant Secretaries. But most of all we communicate directly with the Salary [Section] people. (TS-03)

A senior official of the TSC, in echoing what the Chairman had said, also went on to identify matters about which the National Secretary of Education is contacted and others about which the office or the official concerned is approached:

> [We communicate with] the Secretary on policy matters. For administrative matters, we deal with all the teaching divisional heads, including the technical, teacher education, and school administration and liaison divisions. We liaise with these [divisions] on many matters of teachers' welfare, like appointments, salaries, and other similar stuff. Besides the teaching divisional heads, we also have regular contact with the personnel officer because of salary queries and salary matters that are brought to us by the NEB, the PEB, the teachers themselves, and others like the PNGTA and the church representatives. (TS-02)

The foregoing would seem to indicate that for day-to-day operational matters, the TSC's interaction with the NDOE is through the officials who are charged with those responsibilities. For example, in matters relating to the Master Positions Register, the relevant officials of the TSC would interact with the Assistant Secretary for SALD. This unique relationship between the TSC and the NDOE may be explained by the fact that both the NDOE and the TSC are housed in the same building complex. Consequently, there are ample opportunities for the officials from the two organizations to meet and establish acquaintances in the corridor and/or during lunch hours. Officials of the TSC are often invited to sit on certain committees set up by the NDOE. Furthermore, every one of the officials in the TSC who participated in this study was a former official of the NDOE.

These special relationships have made it possible for communication to take place on a nonformal level without undermining the bureaucratic structures.

Boundary Spanning Between the NDOE and the PDEs

The NDOE interacts with the PDEs about matters relating to the provincial high school curriculum, inspection and evaluation reports on teachers, planning and building of new provincial high schools, enrollment of students, school subsidies, and personnel matters concerning teachers. This interaction is very regular and sometimes intense.

The NDOE's boundary spanning with the PDEs. By its very name, the boundary spanning functions within the NDOE are normally invested in the SALD. However, as depicted in the following paragraphs, communication can originate from many divisions of the NDOE, and not necessarily from one office. The origin of the interaction depends on the subject matter being dealt with. In most cases, the communication is directed to the Provincial Assistant Secretary of the PDE.

According to one senior official, SALD and the Division of Policy, Planning, and Evaluation are the units through which the NDOE communicates with the PDEs. He added that this interaction was regular and occurred on a day-to-day basis:

> We interact a lot with our assistant secretaries in the provinces. We have SALD within the department itself, and that division, by the very name itself, is responsible for close liaison with the assistant secretaries in the provinces. For example, if you want to check on enrollment or any data, we would request that through the SALD, to ask the assistant secretaries to supply that information to us. We also have the Policy, Planning, and Evaluation Division that may go directly to the assistant secretaries in the provinces. There is a lot of interaction that takes place between these two divisions of the NDOE and the PDEs. (ND-02)

Both the Assistant Secretary for Policy, Planning, and Evaluation and the Assistant Secretary for SALD confirmed what their colleague said about directing communication through the office of the Provincial Assistant Secretary of the PDEs. They also added that although it is not normal to direct communication to someone below the head of a unit or a division, sometimes it becomes convenient to contact the junior official who is deemed to be in a position to provide the information sought. The Assistant Secretary for Policy, Planning, and Evaluation in the NDOE identified the reform coordinator as "another important official I deal regularly with" (ND-01). The reform coordinator is a provincial planner who prepares the educational development plans for the province. The Assistant Secretary for SALD, although confirming that sometimes the communication may be directed to a more junior official, pointed out that "if I want to get other things from junior officials, I go first to the Provincial Assistant Secretary of the province and ask his permission to get information from the other officials" (ND-06).

At the most senior management level, one senior official of the NDOE contended that in communicating with the PDEs, the NDOE is supposed to communicate with them through the Provincial Department Secretary, but there were also times when this protocol was disregarded. For matters relating to schools and their administration, it was more convenient for the NDOE to communicate through the Provincial Assistant Secretary of the PDE:

> With the PDEs we are supposed to communicate through the provincial departmental head, but we find it more convenient to direct our communication on anything to do with school administration and school operation to the Provincial Assistant Secretary of Education. They do the same with us. (ND-04)

The Deputy Secretary of Education for Administration added that the senior managers in the NDOE were able to communicate directly to the Provincial Assistant Secretary of Education "because of the many years [we] have worked with most of these people" (ND-12). It has been stated elsewhere that most of the Provincial Assistant Secretaries of Education worked their way through the ranks, having initially begun as teachers. Consequently, they had worked with or under the supervision of the officials from the NDOE and the TSC at some stage of their working life. Their familiarity with each other is probably one explanation for the flexibility in directing communication through channels other than what the bureaucratic structure demands.

The PDE's boundary spanning with the NDOE. Communication from the PDEs to the NDOE usually originates from the office of the Provincial Assistant Secretary. However, because of the nature of their tasks, the Appointment Officer, the Senior Professional Assistant, and the Provincial Administrative Officer also communicate directly with the officials from the NDOE. The Provincial Assistant Secretaries at the PDEs communicate with the NDOE through the Assistant Secretaries. They do not go directly to the National Secretary of Education, as stated by one Provincial Assistant Secretary of Education:

> If I need to communicate with the NDOE Secretary on an area that the Secretary is responsible for, like registration of a teacher and inservice training, I go through the particular Assistant Secretary or the person who's responsible to look into the matter for me. (AS-04)

Appointment Officers, on the other hand, communicate with two NDOE officials whose duties relate to the recruitment and employment of teachers in provincial high schools. They communicate with either the person responsible for (expatriate) contract teachers or the personnel officer for matters relating to teachers' salaries. These communications involve inquiries "regarding visas for contract officers . . . and salaries and allowances [for teachers]" (EP-02). The Provincial Administrative Officer with one PDE also contacts the same officials with whom the Appointment Officer communicates within the NDOE. But she contacts them for "recruitment of contract officers . . . and to get the printout [on staffing] for the quarterly staff strength" (EP-03). The quarterly staff strength records are used to prepare reports to the Provincial Executive Council.

The Superintendent of provincial high school operations, or the Senior Professional Assistant, as the position is designated in some provinces, is also another official who communicates directly with the NDOE. This communication with the NDOE is often through the SALD and the planning section of the Division of Policy, Planning, and Evaluation.

Boundary Spanning Between the TSC and the PDEs

Boundary spanning activities between the TSC and the PDEs concern the appointment of teachers to teaching positions, discipline of teachers, and the terms and conditions of teachers' employment. The TSC is the employer of teachers; teaching positions, however, belong to the Provincial Governments. Consequently, constant interaction is necessary because no single organization has all the powers necessary to deal with teachers and their problems.

The TSC's boundary spanning with the PDEs. The TSC, although having a great deal of powers in matters relating to employment terms and conditions for teachers, is a small organization and does not have the capacity to implement all of its decisions. It therefore perceives both the NDOE and the PDEs as the service arms of the decisions relating to terms and conditions of the employment of provincial high school teachers made by it. The TSC, however, does not have a direct relationship with the Provincial Assistant Secretary of Education as the head of the PDE. Its relationship with these officials is through their capacity as the chairpersons of the PEB or a committee of the PEB, because the PEBs are the bodies that take decisions on matters concerning the appointment, promotion, demotion, transfer, or the discipline of teachers. As Chairman of either the PEB or one of the committees of the PEB, the TSC can direct the activities of the Provincial Assistant Secretary of Education. The Chairman of the TSC elaborated:

> We deal with the Provincial Assistant Secretary [of Education] and direct him, not as his Provincial Secretary does, for we have no power over the Provincial Assistant Secretary's position. He is an employee of the Provincial Government and therefore under the Provincial Secretary. We deal with him as an authority, like

> the Chairman of the Provincial Education Board, the Chairman of the Disciplinary Committee, or the Chairman of the Teacher Appointment Committee. (TS-03)

The Teaching Service Commissioner for Legal Matters also noted that the Provincial Assistant Secretary of Education is the key person in the province for communication, but sometimes it becomes necessary for the officials of the TSC to communicate with the Secondary Inspector on matters pertaining to the teachers in provincial high schools. "The Secondary Inspectors are also very important in saying what kinds of experiences are necessary for appointment to teaching positions" (TS-01). As noted earlier, the Secondary Inspectors are national officials located in the provinces. Because of the nature of their roles, they are most knowledgeable about the kinds of skills needed for secondary teaching. As with the interaction between the NDOE and the PDEs, the officials from the TSC also communicate directly with junior officials at the PDEs. According to the Teaching Service Commissioner for Operations, although the Provincial Assistant Secretaries of Education are the main channel for communication, there is also regular contact with the Appointment Officers.

The PDE's boundary spanning with the TSC. The PDEs' communications with the TSC concerns matters relating to teachers in the provincial high schools. Although communication with the TSC is usually through the Provincial Assistant Secretary of Education, Appointment Officers in the PDEs are also able to communicate with the TSC. Their communication is directed to the Inspector of Appointments for decisions relating to the apointment of teachers to positions, as exemplified by the response from an appointment officer in a PDE:

> The person I communicate most with at the TSC is the Inspector of Appointments. He takes our queries up to the right Commissioner who may be involved in appointments. But sometimes, if we know the right Commissioner to deal with, we go direct to him. (EP-02)

The Provincial Administrative Officer is another person who also communicates with the TSC. A provincial administrator indicated that she communicates with the TSC through the Inspector of Appointments, who is also referred to as the *appointment officer*. She also communicated directly with the Commissioners. Her communication with these officials were related to the discipline recommendations that the PEB sent to the TSC. In her words:

> With the Teaching Services Commission I deal with the Appointment Officer himself and the Commissioners in regards to the results of the disciplinary decisions we forward to them. I have to get those back for the Assistant Secretary to present at the Provincial Education Board meeting. (EP-03)

The Superintendent responsible for provincial high school operations is also another official who communicates directly with the TSC. This official's communication is through the Teaching Service Commissioner for Legal Matters. The communication is related to matters such as creating new teaching positions, as well as upgrading and degrading existing positions. Frequently, the interaction is related to special allowances that provinces may want to pay teachers.

The Provincial Assistant Secretaries of Education also communicate with the TSC. Just as the communication with the Secretary of Education is directed through the responsible Assistant Secretary within the NDOE, communication with the Chairman of the TSC is also directed through one of the Commissioners, as evidenced in a statement made by one Provincial Assistant Secretary of Education. In his words:

> Likewise with the Teaching Service Commission, if it is a policy matter, I communicate with the Chairman through the Commissioner for Legal Matters. For other operational matters, [the communication] goes through the Commissioner for Operations. (AS-04)

Summary

In general, the boundary spanning activities between pairs of these organizations do not follow strict bureaucratic procedures. Often protocol is ignored, and interaction between any of the officials in the various organization is allowed and tolerated or accepted. Three reasons can be identified for this state of affairs. First, it would appear that for a number of officials, getting the job done as efficiently and effectively as possible takes precedence over the bureaucratic procedures. Thus, officials are able to go directly to those counterparts or subordinates who are judged to be in the best position to provide the information required. Second, by and large the major operators in these organizations know each other by name and in person. One common characteristics of these operators is that the great majority of them began as teachers and came up through the ranks. Consequently, they are familiar with both the Teaching Service Act and the Education Act and how the system should operate. Further, as teachers or former teachers or administrators facilitating education, they are all interested in the education of children. This common interest influences the level of tolerance that is present in their interactions. Finally, as former teachers they have similar professional interests interwoven with their personal aspirations. The route for promotion follows the route of appointment at the PDE level to positions in either the TSC or the NDOE, and sometimes from the NDOE and the TSC to the PDEs. These three factors facilitate the great degree of nonformal interaction that is prevalent in these interorganizational relationships.

Domain Consensus-Dissensus

As stated at the beginning of this chapter, the roles and the functions of each of these organizations with respect to the operation of provincial high schools are stipulated in the Education Act of 1983 and the Teaching Service Act of 1988. From an analysis of the interview data, three major domains in which consensus and dissensus have been experienced were identified. These are curriculum, employment terms and conditions of teachers, and policies relating to provincial high schools. The purpose of this part of the chapter is to identify and discuss the nature of consensus-dissensus for each of the domains identified.

The main technology of any education system is learning and teaching. For learning and teaching to occur, there must be a curriculum to teach and teachers to teach that curriculum. In order to carry out teaching and learning on a continuous basis and in a sustained environment, schools must be built to accommodate these functions. Each of the domains identified above provides the focus for the discussion of consensus-dissensus, but the discussion is presented from the perspective of each of the organizations in the study. This enables the reader to get a glimpse of the type and nature of agreements and disagreements among the organizations in the study.

Consensus-Dissensus Relating to the Curriculum

Curriculum responsibilities include taking charge of the design of the content of the curriculum, the procurement and distribution of support materials. It also involves supervision and evaluation responsibilities. It is a function delegated to the NDOE under the Education Act of 1983. The curriculum is implemented by teachers who are employees of the TSC occupying positions in schools owned by the provinces. In general, "the three [types of] organizations agree that curriculum is a national function" (ND-01). This is endorsed by statements made by the Provincial Assistant Secretaries of Education. Even though, as noted earlier, a number of provinces have assumed some of the responsibility for the provincial high school curriculum, the Provincial Assistant Secretaries of Education agree that the curriculum functions must remain with the NDOE. Several reasons were generated to support this thinking, as indicated in these responses. A Provincial Assistant Secretary of Education, serving in a very progressive province as far as education is concerned, felt that a national standard of curriculum was important to the nation; therefore the NDOE should maintain the responsibility for the provincial high school curriculum:

> We can't [take over the curriculum function], because especially in areas of setting standards, for example, we want to maintain a national standard with other provinces in Papua New Guinea, especially in subjects like science, math, English, and social science. That is why I feel that the national department must continue to look after the curriculum. (AS-01)

Another Provincial Assistant Secretary of Education with many years of experience in several PDEs felt that the PDEs do not have the capacity to take on this responsibility. He argued that the PDEs can handle only administrative decisions. He explained:

> The provinces just do not have the capacity to handle academic and professional matters at the provincial level. Administrative matters, yes, we can handle these at the provincial level but professional and academic matters, especially curriculum, . . . should still be controlled by the NDOE. The key thing here is to ensure that everybody works cooperatively together within the national system. (AS-02)

The consensus among the senior education officials is that PNG's education system is small in comparison to many other systems; thus it is important to maintain one national system where functions are shared among these organizations. One Provincial Assistant Secretary of Education, serving a first term in that position in a province which places emphasis on education, underscored the need for national coordination and the maintenance of a national standard. In his words:

> I think that the National Department of Education has a bigger role to play in the coordination of all educational activities to maintain standards. Therefore, I think that we need the National Department of Education to coordinate the examinations and the inspection systems at the national level. (AS-03)

The senior education officials believed that the provinces should not take over the inspection and examination roles, even if they have the capacity to do so. The functions of inspections and the curriculum, they argued, were best left with the NDOE to maintain uniformity throughout the country because the issues of curriculum and examination were of national importance. This belief is epitomized in a statement made by one Provincial Assistant Secretary of Education. He said:

> To start off, we don't have the people. But even if we have the resources and the people, I think that [curriculum] belongs at the national level. I just feel that way. I can't see us doing inspections because if we are going to look at all the provinces, if the provinces have their own way of doing inspections, for instance, there will be no uniformity. If the provinces have to set their own examinations, then what are we trying to do? I don't think that's possible, so it's only best that the National

> Department looks after these functions which are of national importance to us. (AS-03)

Another function in which some contention has occurred is with respect to the inspection of the operation of provincial high schools. The inspection function is one of the critical activities related to the successful implementation of the curriculum. It involves the supervision of the implementation of the curriculum as well as the evaluation of the work of the teachers. As part of the curriculum function, this task is currently being fulfilled by the NDOE. According to one senior official in the NDOE, "It is one of the major agreements among the three [types of] organizations that there must be an inspection system in place and administered by the NDOE" (ND-02). Although all Provincial Assistant Secretaries of Education agree with the need for an inspection system, as stated above, there are some who argue that the PDEs should take over the inspectorate function. For example, one Provincial Assistant Secretary of Education argued that for practical reasons this function should be transferred to the PDEs, and the work of the Secondary Inspectors should be supervised by the PDE. He argued that not only should this define the problem of supervision of the activities of the Secondary Inspector, but that there would also be a number of advantages for taking such a decision. He continued:

> In fact, based on my previous experience with inspections and my experience with the PDE, that is one area that should be taken away from the NDOE. The Inspectors, I think, should be placed under the direct control of the PDE. . . . The advantage . . . is that from the practical point of view, these people are here with us all the time, and we can tell them what to do. (CP-01)

From the perspective of the NDOE, it was felt that some of the Provincial Assistant Secretaries of Education want to take over the control of the Secondary Inspectors so that they will be able to have more say in their appointment and also direct their work according to their own priorities. The Assistant Secretary for Inspection and Guidance maintained that when the issue was discussed, all of them agreed that a national appraisal system must be kept. He elaborated:

> There are from time to time occasions when provinces feel that they should have more control over the functions of the inspectorate. By and large, when we get down to discussing those issues and what exactly is meant by them, people tend to come to the conclusion that if we are going to have a national appraisal system, then it has to be a *national* appraisal system. We can't have an appraisal system that is different from one province to another. There must be a standard from a national perspective. (ND-03)

A senior official of the NDOE explained that the disagreement that has occurred is caused by a lack of resources, that prevents the NDOE from performing its duties, especially in recent years. Because the NDOE did not have sufficient resources in the last couple of years, the Secondary Inspectors were not able to visit each school three times a year. Consequently, the PDEs took on part of the resource responsibility to assist the Inspectors' travel to schools. This prompted some of them to want to take over such responsibility. In his words:

> I think the problem is lack of resources. The PDEs say, "We want to do this because you are not providing it. Because you don't have the money, we'll do it". I think one area that [the Provincial Assistant Secretaries of Education] were talking about is that they wanted to take over the inspection function. . . . I think what they wanted to do is to use the Inspector in the way they prefer. They wanted to direct the activities of the inspector rather than the NDOE directing them. (ND-04)

The Assistant Secretary for Inspections and Guidance claimed that the issue of transferring the inspection function to the PDEs is not shared by most Provincial Assistant Secretaries of Education, and that the NDOE would like to keep the function to maintain impartiality of the inspection system. According to him:

> Some provinces would; others I think would not. It's not a general feeling among the provinces. It tends to be certain Provincial Assistant Secretaries of Education who feel that they would like a stronger role in selecting staff [i.e., Inspectors]. Our view, and I think it's not just my view but the NDOE view, is that we value the independence of the inspectorate. We value the fact that to provide the service to the provinces the inspectors are not in those positions and dependent on the provincial decisions. (ND-03)

Although some of the reasons advanced by the PDEs for wanting to take over the functions of the inspectorate appear quite relevant, one of the major reasons that the NDOE insists on a national evaluation system, supervised by its staff, is the fear of misuse of the inspectorial function by the Provincial Assistant Secretaries of Education. Several Secondary Inspectors shared that they had experienced situations where the Provincial Assistant Secretaries of Education in some provinces had asked them to carry out an immediate inspection of teachers. When they asked these officials to justify their request, they found that quite often immediate inspection was requested because these Provincial Assistant Secretaries of Education had personal differences with the teachers concerned. According to the Secondary Inspectors, this is not a sufficient reason to warrant such action. An immediate personal inspection is warranted only if a teacher is not fulfilling the professional duties he or she is expected to carry out.

Another function that is related to curriculum, and by law a function of the NDOE, is inservice training of teachers. There is now evidence that some provinces have, on a voluntary basis, taken on some of these responsibilities. This has occurred, according to the Superintendent of the SDU, because the NDOE is not always able to meet the teachers' inservice training needs due to a lack of resources. Consequently, many PDEs, recognizing the value of inservice training to improve students' classroom performance, have begun taking on some of this responsibility and the NDOE welcomes this participation. This official elaborated:

> Until now . . . the matter of staff development was perceived to be a national function. That is because of convenience, I think. The state gave the money, and therefore the state should be responsible for the training and development of the teachers. But all the parties, even the staff in the institutions, now realize that the national department cannot do it all. . . . The provinces in the last three years have accepted quite a bit of the training responsibility and would like to do it themselves. If they have the money they would like to organize school-based staff development programs. They would like to play a major role in that. (ND-08)

What has evolved, therefore, is that there is general consensus among the participating organizations that what was once a national function should now be shared by both the NDOE and the PDEs. According to the Superintendent of the SDU:

> That is a big break-through because in the past the attitude was like, "The National Government, that's your job; you do it." But now the TSC, the PDEs, and we have realized that each of us must play a role in this function. Wherever the resources are, we must all use them. So it is a positive step, because now we are all talking and we are saying, "What can the NDOE do? What can the PDE's do?" It is making a lot of sense to us. (ND-08)

Similar developments are taking place with regard to the provision of guidance and counseling services to the students in provincial high schools. According to a junior official of the NDOE, some provinces have shown interest in creating and paying for counseling services in their own provinces. This is a development, she thought, that the NDOE would also support. She explained:

> Three provinces have made comments that they would like to have somebody within their own province, but [would like to] get assistance from us to train that person. One of them was the North Solomons province. East New Britain have always made that remark. In Western Highlands, they already have in place a guidance officer on trial in two of their biggest schools, Hagen Park and Hagen

High, which share a school counselor and this counselor operates between the two schools during the week. (ND-11)

Consensus-Dissensus Relating to Teachers

The delegation of responsibilities relating to the employment, supervision, and discipline of teachers was described above. Although there is general consensus on the division of these functions, some dissensus has emerged in the performance of these roles. In this section, functions in which there is general agreements are identified first. They are followed by a discussion of the dissensus that is evidenced in decisions relating to teachers.

As stated above, the member organizations generally accept the delegation of tasks and responsibilities relating to matters concerning the employment of teachers. To a greater extent, the TSC perceives this general agreement on the division of the roles and responsibilities as a function of the Teaching Service Act of 1988. According to the Teaching Service Commissioner for Legal Matters, "Agreements relating to the conditions of service and procedures for dealing with the teachers are defined in the Teaching Service Act. All key players must , therefore, operate within that framework" (TS-01). Another Teaching Service Commissioner, in echoing what his colleague said above, emphasized that these organizations were "duty bound to implement both the Teaching Service Act and the Education Act, and therefore they need to understand these two pieces of legislation" (TS-02).

There is indeed agreement that the TSC should continue to be responsible for the advertisement of teaching positions nationally. In regard to the processing of teachers' salaries, the member organizations agree that budgeting for the salaries of provincial high school teachers is the responsibility of the provinces. The NDOE, on the other hand, is responsible for the processing and payment of teachers' salaries and entitlement. This responsibility is now in the process of being delegated to the PDEs. Some provinces have taken over the task of preparing and paying the teachers' salaries. Other are expected to follow suit as their capacities allow. Another responsibility in which there is general consensus is the recruitment of overseas teachers, a task that the NDOE performs. As mentioned elsewhere in this chapter, overseas teachers are subject to the National Government's immigration laws; consequently, both the Department of Foreign Affairs and the Department of Personnel Management are part of the structure affecting the recruitment process. Because of the costs that are associated with the recruitment function, it is both economical and effective to leave the overseas recruitment function with the NDOE. One important fact in regard to overseas teachers is that over 90% of the provincial high school teachers are citizens. Since there are very few positions for overseas teachers, it would be uneconomical for each province to take separate trips overseas for recruitment purposes.

Some dissensus has surfaced over the years in relation to matters concerning the appointment, discipline, transfer, demotion, and/or promotion of provincial high school teachers. These are matters in which the NDOE does not have direct input. They are, however, matters in which only the TSC and the PDEs have delegated functions. As stated in chapter 4, nearly all teacher employment decisions of the PDEs have to be approved by the TSC. The TSC as the employer of the teachers does not deal directly with the PDEs. It has no power to do so. Rather, it deals with the PEBs, which are the appointing authority for teachers in provincial high schools. The PDEs serve as the administrative arm of the PEBs that carry out the decisions that the PEB makes. The Teaching Service Commissioner for Legal Matters pointed out that there is little disagreement, if any, with the NDOE. Disagreements, however, do occur with the PDEs in relations to the way appointments, promotions, transfers, and demotions of teachers are carried out by the two organizations. In his words:

> I think we do disagree not with the departments but rather with authorities that [are known] as Provincial Education Boards, and in the case of Lake Murray and the NCD, they are District Education Boards. These are the boards that are legally established to make decisions on teachers' appointments, transfer, demotion, promotion, [and discipline]. (TS-01)

One of the functions that causes disagreement is in interpreting the qualifications of teachers for appointment to provincial high schools. The interpretation of who is qualified and who is not qualified varies between these two organizations. The TSC participants claimed that PEBs often ruled someone not qualified and therefore did not appoint that person to a position in a provincial high school. The TSC officials felt that the PDEs used reasons known only to themselves to disqualify teachers for appointment to create flexibility on their part to maintain their ability to shift teachers around. When checking the qualifications of these teachers, the TSC found that there were no valid reasons that these teachers were not appointed. An Inspector with the TSC elaborated:

> When it comes to the advertisement of positions, we expect all positions to be filled. One of the biggest problems is that teachers are not considered by the PEBs as qualified for some of the positions that they are in fact qualified for. So in the end they don't appoint them. This is one of the problems that we are encountering at the moment. The positions are not being filled because the appointing authorities have their own interest. For example, if they appoint somebody to a position on a permanent basis, it will be difficult to remove him at some later time. So they like

> to have flexibility . . . to move teachers around. But that is not meeting the purpose of the appointment procedures. (TS-04)

From the perspective of the PDEs, the dissensus in the appointment process was caused by the TSC. There were numerous complaints from the PDEs that the TSC made changes to their recommendations without good grounds for doing so. The most common complaint from the PDEs was that when provincial appointment committees made recommendations for appointment to teaching positions, the results they got were not what they had recommended. Their expectations were that the TSC should respect the recommendation of the PEBs because, "we are on the ground; we know the teachers, their experience, their ability, and the roles and functions that they will perform" (AS-01).

A second area in which dissensus occurred is in regard to the decisions relating to the discipline of teachers. One aspect of this problem is concerned with the perspective from which the discipline decisions are being made. The interview records seem to show that the TSC places a great deal of emphasis on a legal interpretation of the Teaching Service Act, as evidenced by the statements made by the Teaching Service Commissioners above. It emphasizes that due process has to be strictly adhered to by the educational authorities over making teacher discipline decisions. This overemphasis on the legal interpretation causes some dissensus, especially among the Provincial Assistant Secretaries of Education, as elaborated upon later in this section. Suffice to say here that the TSC's emphasis on ensuring that teachers' rights are not infringed upon is perceived by the PDEs to be not in the best interests of the children. One Provincial Assistant Secretary of Education explained:

> We charge a teacher, and the PEB makes the decision. The [PEB] decision is that the teacher is dismissed. That's it, the teacher [should be] dismissed. You only want the TSC to approve your decision. If the teacher has appealed against the decision, the TSC must consult with the PEB. (CP-01)

The analyses of the interviews reflected that the TSC often disagrees with the processes that PDEs followed in making such decisions. It would appear also that when teachers appealed against discipline decisions, the TSC does not consult the PEBs, as implied in this statement made by a Senior Professional Assistant:

> In the case of the Teaching Service Commission, there are situations in which it has listened to a teacher without finding out exactly why this teacher has been put off the payroll and refused such other privileges the other teachers are enjoying. These are the kinds of things in which they need to actually liaise with the Provincial Divisions. (AS-05)

The foregoing does not mean that the TSC is the cause of all the dissensus relating to the teachers. There is indeed evidence to suggest that PDEs are just as much to blame as the TSC. For example, a study of the East New Britain PEB meeting minutes revealed that certain discipline decisions taken by this body were rejected by the TSC on the grounds that the punishment recommended could not be applied to this particular case. In this case, the teacher being disciplined was a designated level one teacher. Therefore the PEB's recommendation that the teacher be demoted by one level could not be applied because the teacher was already on the lowest rung of the teaching hierarchy. The PEB was duly advised by the TSC (Department of East New Britain Provincial Education Board, 1995).

Consensus-Dissensus Relating to Provincial High School Education Policies

Dissensus has also been experienced in matters relating to the building of new provincial high schools or expanding existing schools to create more educational opportunities to meet the demand for secondary education. The building of new provincial high schools or the expansion of existing schools is a function of the PDEs in as far as the provinces are able to build the new schools or expand existing schools without requiring financial assistance from the NDOE. In reality, the PDEs are not able to fund these activities on their own without depending on the National Government for financial assistance. The establishment of a provincial school is a costly undertaking, so in many ways the provinces are not able to make individual decisions. The PDEs make recommendations to the NDOE and hope that these recommendations will be built into the national plan. Because of PDEs' inability to fund new schools or expand the present schools, the responsibility has become a joint function with the NDOE. The PDEs therefore complain that "in many ways they play second fiddle to the NDOE" (CP-01). This disagreement arises, in part, because of the fact that it is the NDOE which has the final say on which provinces' submissions for new provincial high schools will be included in the national education plan.

Domain dissensus has also occurred between the NDOE and the PDEs in relation to provincial high school educational policy. Under the provisions of the Education Act of 1983, the development of educational policy in regards to the expansion of the provincial high school education is a shared function between the NDOE and the PDEs. But in general the NDOE is the dominion partner in this function. One senior official in the NDOE agreed that "there have been some major disagreements on major policy areas, particularly on free education" (ND-02). He cited the National Government's "free education" policy as an example. The disagreement was over the method of procurement of materials and took place at the ministerial level. In elaborating on the disagreement between the provincial authorities and the national department, this official pointed out that although everybody acknowledged the need for material to be provided to the schools, the provinces opposed the way the National Minister was proposing the purchase of school material. He explained:

> The free education policy is basically a National Government decision that provides funding to supply materials to schools. Now, I think everybody accepts the fact that there is a need for materials to be put into schools. The administration of that policy, however, caused some disagreements between us and the provinces. Our Minister, for example, wanted material procurement and delivery to be centralized. In other words, the procurement and the distribution of materials to the provinces would be controlled by the NDOE. A lot of provinces did not agree with that. The NDOE, because of the Minister's directive to us, more or less supported the idea. [The provinces argued that] because they are on the ground, they are the ones who know what is best for the provinces. Therefore they should be given the money and be responsible for purchasing the materials and distributing them. (ND-02)

In the last couple of years and at the time of this research, the provincial high school system was being restructured to create more rooms for students in Grades 11 through 12. These educational reforms called for the transfer of Grades 7 and 8 from selected provincial high schools to selected primary schools. In their place, Grades 11 and 12 were to be introduced in these selected provincial high schools. These new schools are known as *secondary schools* (Department of Education, 1994). This policy was initiated by the NDOE with TSC and PDE support; however, disagreements occurred between the NDOE and the PDEs in relation to how and at what speed to implement it. According to one senior official of the NDOE, the disagreements occurred in regard to the selection of the schools to be converted and the rate at which the reforms could be implemented, as well as the sources of funds.. He explained that because of the limited funding available and because the national department was asking for funding from the National Government, "we consider it our responsibility to tell the provinces, 'Look, there is not enough money around. Why don't we establish only one secondary school instead of 10 schools or 12 schools'" (ND-02). But the provinces know that there was a high demand for secondary education, so they wanted to create more places for Grades 7 and 8 and Grades 11 and 12 without being realistic about the sources of the funding for such expansion. This official added that the disagreements stemmed from "our inability as a national department to supply the resources, such as teachers and the funding to build the classrooms" (ND-02).

Why No Major Disagreements?

The above discussion of consensus-dissensus seems to indicate that any disagreements that have arisen are related to the way that roles and functions were being carried out and not in terms of who should be responsible for what. There seemed to be general consensus that all of the organizations respected the delegation of functions contained in both the Teaching Service Act of 1988 and the Education Act of 1983. Three major reasons were suggested to explain the harmony that existed in relation to the division of roles and the functions. The First Assistant Secretary of Education for Standards in the NDOE stated:

> I don't think we have had too many disagreements. I think we have agreed with each other on most things . . . basically because of [our] reference to the Acts. Because whatever you do, you have to make sure that these are things that are mentioned in the Acts. Whatever decision we make must reflect what is required in the Acts. (ND-16)

In a similar vein, one senior official in the NDOE thought that cooperation -- evidenced in the lack of major disagreements -- was because of the fact that in general all the officials involved in the operation of provincial high schools came up through the ranks of teachers and therefore understood the relevant legislation well and adhered to it. He said:

> There is very little disagreement because a lot of Provincial Assistant Secretaries [of Education] have gone through the system. They were former teachers or former lecturers whatever, and therefore they understand [the division of functions]. Some of them have a very good grasp of the Education Act. Therefore they understand the provincial functions in relation to education. (ND-02)

The Chairman of the Teaching Service Commission noted that perhaps the one drawing factor that made these organizations work together harmoniously was the general belief by all that each of them was there for the purpose of providing education to children. Because of the common concern for children, understanding and tolerance were fostered. In his words:

> I think we all agree on one thing, and that is, the teachers are employed to teach children in the school. That, I think, is a very important point of agreement. Our aim is not only to employ teachers but to employ teachers for the purposes of teaching our children. I think that's one . . . factor that draws us together. (TS-03)

Summary

The above discussion reveals that although dissensus has been experienced in the way certain roles and functions are performed, there are no major disagreements among or between any pairs of the member organizations over the delegation of roles and functions under the provisions of the Education and the Teaching Service Acts. This harmony is fostered for three reasons. First, all organizations generally respect the provisions of the Education and the Teaching Service Acts. Second, most of the senior officials in all of these organizations came through the ranks of teachers and therefore are familiar with the delegation of roles and functions and how the education system should work. Third, the general objective of the member organizations is to provide education for the children of PNG. The oneness of purpose has contributed to fostering tolerance when bureaucratic procedures are sometimes not adhered to.

Chapter Findings

From the above descriptions of interorganizational linkage contexts, a number of pertinent points are highlighted. The purpose of this part is to restate the findings of this chapter and to highlight the perspectives of each of the organizations involved in the study. The findings are summarized under legal, political, and social contexts, interdependency for services, boundary spanning, and domain consensus-dissensus.

Legal, Political, and Social Contexts

The Education Act of 1970, later superseded by the Education Act of 1983, created the National Education System (NES). Some of the roles and functions of education were decentralized because of the suspicion that existed between the government and the churches that ran most of the schools. From the government perspective, delegating some of the educational responsibilities to the local level allowed the central government to demand resource input from the churches and the communities. Soon after PNG gained political independence, Provincial Governments were established to overcome the threat of secession by some of the affluent provinces. With the establishment of the Provincial Governments in 1977, the Education Act and the Teaching Service Act were amended to grant to the Provincial Governments certain educational powers.

Under the provisions of the Education Act of 1983 and the Teaching Service Act of 1988, the TSC remained the employer of teachers on behalf of the National Government. As employer, it retained the responsibility for determining the terms and conditions of employment for teachers. It was also delegated the responsibility for approving the creation of new provincial high school positions and the upgrading or downgrading of existing positions. The TSC is also responsible for final approval of the appointment of teachers to vacant positions and of the teacher discipline decisions made by the PEBs.

The NDOE, on the other hand, is responsible for coordinating all educational activities, and in particular for the preparation of a national education plan. It is also responsible for the provincial high school curriculum, including the inservice training of teachers and the inspection of the teachers' work. The NDOE is also responsible for the registration of teachers and the recruitment of expatriate teachers.

The PDEs, through PEBs, are responsible for preparing a provincial education plan for approval by the Provincial Executive Council. They are also charged with the task of overseeing the administration of the provincial high schools, the appointment of teachers to positions in provincial high schools, and the application of the terms of service to teachers. In conjunction with the NDOE, the PDEs are also responsible for building new provincial high schools.

Interdependence Among the NDOE, the TSC, and the PDEs

The foregoing shows that interdependency between and among the three organizations is the result of mandates established in both the Teaching Service Act and the Education Act. Because of the nature of the delegation of functions, where certain activities are shared by either two or more of these organizations, interdependence becomes an integral part of the interaction among the member organizations in order for these functions to be attended to and the associated tasks completed.

The establishment of the TSC took away from the NDOE the responsibility for industrial matters relating to the employment of teachers. This allows the NDOE to concentrate on professional matters. Other than that, the NDOE does not seem to depend on the TSC for any services. The TSC, however, depends a great deal on the NDOE for many of its decisions to be implemented. These include the processing of teachers' salaries, the compilation of the Master Position Register, and the inspection of the work of teachers.

The NDOE also depends on the PDEs for several functions to be accomplished. The planning of the national education system is the NDOE's function. However, it cannot carry out this planning function without the assistance of the PDEs. Provinces play a critical role in this process. First, the PDEs, through their PEBs, are responsible for educational planning in their respective provinces. Thus, in relation to the planning for provincial high schools, the provinces will need to approve a provincial plan for the expansion and/or maintenance of provincial high schools in their provinces. These plans are then sent to the NDOE for collation and presentation to the NEB, whose task it is to prioritize and allocate resources accordingly. For planning purposes as well, the NDOE depends on the PDEs for statistical data on schools, students, and teachers.

Not only must the NDOE depend on the PDEs to accomplish its planning function, but it must also depend on them for the implementation of any national plans. In relation to the

PDEs, the schools belong to the provinces, and therefore, apart from the curriculum functions, the PDEs are responsible for their day-to-day operation. The NDOE therefore depends a great deal on the good will and cooperation of both the PDEs and to a lesser degree the TSC, to ensure that national education plans are implemented.

The NDOE also depends on the PDEs for resource support in the performance of some of its functions, in particular the carrying out of the inspection and guidance functions and the inservice training responsibility. The Secondary Inspector and the Guidance Officer are NDOE officials who are located in the provinces. They need office space and housing. The NDOE depends on the PDEs to provide these resources. The PDEs have always obliged to meet this need. The PDEs have also provided office facilities and typing services for the Secondary Inspectors and the Guidance Officers. More recently, the NDOE had not been able to carry out the minimum three visits to the schools by the Secondary Inspector. In some provinces the PDEs have come to the rescue by providing the needed transport and money for them to carry out this function.

The PDEs are also dependent on the NDOE for a number of things. The PDEs depend on the NDOE to assume a leadership role in decisions on the provincial high school curriculum and its implementation and evaluation. Many Provincial Assistant Secretaries of Education feel that this is critical to maintaining national standards and the competitiveness of the schooling system in producing qualified graduates. The PDEs have also come to depend on the NDOE for the inservice training of their educational planners. The PDEs receive technical advice from the officials of the NDOE on the appointment of teachers and other administrative matters. Technical advice has also been given to provincial education planners. Furthermore, the PDEs also depend on the NDOE for the recruitment of expatriate teachers to teach in provincial high schools.

As an institution, the TSC is a small organization. It was established with a view to taking decisions on the teachers' terms and conditions as well as providing an oversight of the way teachers are treated by other educational authorities. As such, it is dependent on both the NDOE and the PDEs to implement its decisions and to carry out some of the functions that it would, as the employer, perform. The TSC therefore cannot operate without the aid of the NDOE, simply because the decisions it makes are implemented by the various sections of the NDOE. One such area is the processing and delivery of teachers' salaries. This function is performed by the NDOE. More recently, a number of PDEs have begun to take on this function. The appraisal function is also carried out by the NDOE. The NDOE is responsible for inspecting and evaluating the work of the teachers for promotional and disciplinary purposes. The NDOE, through the School Administration and Liaison Division, also keeps the Master Position Register. It is able to keep track of which teachers have been appointed to positions in provincial high schools and which teachers have not in any given academic year. Another function that is carried out by the NDOE is the provision of inservice training for teachers.

The TSC also depends on the PDEs to implement all decisions and directions it gives relating to the appointment and employment of teachers. It depends on the PDEs to follow procedures set out by it in their decision making relating to the appointment, transfer, promotions, and the discipline of teachers who are members of the teaching service. PDEs, in return, depend on the TSC to approve recommendations for new positions and for upgrading or downgrading of existing positions. The PDEs also depend on the TSC to approve PEB decisions in relation to the appointment, promotion, transfer, and discipline of teachers. This is one critical area in which the TSC and the PDE differ in the way procedures are interpreted. Thus, cooperation between the two organizations has a great bearing on the outcome of these decisions.

Boundary Spanning

It is common under bureaucratic procedures for communication between organizations to be directed through the heads of the respective organizations. This is not always the case in the interorganizational communications between and among the NDOE, the TSC, and the PDEs. Boundary spanning takes place among these organizations at two levels: policy and operational. At the policy level boundary spanning takes place among the organizations through the heads of the departments. Any policy matters originating from within one organization is channeled to the other organizations through the respective heads. One difference in the interpretation of who is the head is that the TSC does not have any direct relationship with the Provincial Department Secretary. For the TSC, the head is the person who is the chairperson of the PEB. In most cases this person is also the Provincial Assistant Secretary of Education.

At the operational level boundary spanning between and among these organizations takes place at various levels between the operators. In this case the bureaucratic requirements are not necessarily adhered to. By and large, most of the boundary activities among these organizations take place at the Assistant Secretary level or its equivalent. In the following paragraphs the dyadic communications between pairs of organizations within the member organizations are summarized.

Communication from the NDOE to the PDEs originates from any of the following sources: the National Secretary of Education, the Deputy Secretaries, the First Assistant Secretaries, or the Assistant Secretaries of the Division of School Administration and Liaison; Division of Policy, Planning, and Evaluation; Division of Inspections and

Guidance; Curriculum Development Division; and the Division of Organization and Methods. Communication with the PDEs can also originate from certain lower levels such as the Staff Development Unit and the Provincial Liaison Unit of the School Administration and Liaison Division. At the position levels of Assistant Secretary or above, communication from the NDOE to the PDEs is generally addressed to the Provincial Assistant Secretary of Education. Often situations occur when communication is directed to the official at the PDE who is seen to be in the best position to provide the information that the communicator is seeking. In this case, officials other than the Provincial Assistant Secretary of Education are contacted.

From the perspective of the PDEs, communication to the NDOE can originate from the Provincial Assistant Secretary of Education, the Appointment Officer, the Provincial Administrative Officer, the Senior Professional Assistant, and the Superintendent of Provincial High School Operations. By and large, the officials below the designation of Assistant Secretary communicate with officials of the same standing within the NDOE. The Provincial Assistant Secretary of Education, however, can communicate with either officials of the same designation or with those of higher designation.

Dyadic interaction between the NDOE and the TSC follows the same pattern as that between the NDOE and the PDEs. The TSC's interaction with the NDOE is largely directed through the person who is most likely to have the information that is sought. Again communication from the TSC can originate from any of the following officials: the Chairman of the Teaching Service Commission, two other Commissioners, the Inspector of Legislation, and the Inspector of Appointments. Communication from the TSC to the NDOE can be channeled through any of the divisions: the School Administration and Liaison Division; the Division of Policy, Planning, and Evaluation; the Division of Inspections and Guidance; and the Division of Organization and Methods. As mentioned earlier, communication to the NDOE can also be directed through the National Secretary of Education as the Chairman of the NEB. Sometimes the Teaching Service Commission Chairman can also communicate directly with a Secondary Inspector stationed in the province to carry out a certain inspection and furnish a report on teachers.

In relation to the employment and inservice training of teachers, communication from the NDOE to the TSC can also originate from any one of the divisions highlighted above. Communication is more often than not directed through the officials designated as Commissioners or to the Chairman. There did not appear to be any mention of communication from the NDOE to any of the officials designated as Inspectors in the TSC.

Dyadic interaction between the TSC and the PDEs differs somewhat from that of the interaction between the NDOE and the PDEs. The difference here is that the TSC does not have any direct relationship with the PDEs. It has an indirect relationship through the PEB. The TSC interacts with the Provincial Assistant Secretary of Education in his capacity as the Chairman of the Provincial Education Board, the Chairman of the Appointment Committee or the Chairman of the Disciplinary Committee. In these matters there is no direct interaction with the Provincial Assistant Secretary of Education as the divisional head of a unit within the Provincial Department, nor is there direct communication with the Secretary of the Provincial Department.

Domain Consensus-Dissensus

Review of the above findings indicates that, generally speaking, the roles and functions of each of the organizations are well established and respected by these organizations. More especially, there is agreement that provincial high school curriculum should remain a function of the NDOE and that the responsibility for the determination of terms and conditions of service for members of the Teaching Service should remain in the hands of the TSC. Though the status quo continues, what seems to be evolving is that in several functions the provinces, through the PDEs, have begun to take on some of the responsibilities of the NDOE. In the last couple of years the PDEs have begun to taken on partial responsibility for providing resource support to the Secondary Inspectors to fulfill their obligations of visiting and carrying out inspection functions. The PDEs have also begun to provide resources for the inservice training of teachers. The participation by the PDEs in these roles is welcomed by the NDOE. Although some Provincial Assistant Secretaries of Education have indicated that they would like to take on these responsibilities fully, they do not have the capacity to do so, and furthermore, maintenance of national standards is of great concern to most of the senior officials. Consequently, there is unlikely to be any further transfer of the curriculum or related functions.

Disagreements in relation to the roles and functions of these organizations have occurred only in the way some of these tasks are performed. Some of the areas identified in the discussion above include the way the disciplinary function is carried out by the Inspectors for the TSC. The criticism here is that when the documents detailing charges of misconduct are sent to the TSC by the PDEs, the TSC is too slow to respond to these charges. A scrutiny of minutes of Provincial Education Board meetings shows that not only does it take a long time for the TSC response to reach the PEBs, but that there is also disagreement in relation to the method of laying formal charges against teachers as practiced by the PEBs. Another function that has led to disagreement over the way it is performed is the process of making tenure appointments to provincial high school positions advertised in the national gazette. The PDEs complained that when they send in their recommendations for appointment to positions, the results are very different from what the TSC publishes. On the other hand, the TSC claimed that the PDEs applied unjustifiable reasons for not appointing teachers to certain positions.

There are, however, real disagreements between the NDOE and the PDEs in relation to the implementation of national educational policies. One such disagreement relates to the new educational policy targeting the restructuring of the provincial and primary schools to make room for more students in Grades 11 and 12. Although both organizations agreed to the introduction of the new policy, disagreements occurred in relation to the speed with which the reforms should be implemented and the sources of funding. The provinces wanted the policy to be implemented at a much faster rate than NDOE had planned. They also wanted the NDOE to meet the resource requirements for these policies. Disagreement between the NDOE and the PDEs also occurred in relation to the Free Education Policy. Under this policy the National Minister for Education wanted to centralize the functions of procuring and distributing of school materials. The PDEs objected to this, arguing that they were in a better position to know what their real needs were and to spend the financial allocations accordingly.

In this chapter the contexts in which interorganizational linkages take place between and among the NDOE, the TSC, and the PDEs were discussed. The discussion was focused on describing the political, legal, and social contexts for the operation of provincial high schools; the interdependence between and among the member organizations for services and resources; the boundary spanning activities; and the consensus-dissensus over the delegation of tasks and functions. The findings suggest that delegation of tasks and functions for education among the these organizations was initially an effort to promote participation in educational decision making and later to quell the political aspirations for power by some provinces. These delegations, generally, are respected by all the organizations. Dissensus has, however, occurred in the way some of these roles and functions are carried out. In some other functions, what is evolving is the realization and acceptance by these organizations that participation of other organizations in some of their functions is in the best interest of the system, and therefore it has been encouraged. The cooperation prevalent in the interaction among the NDOE, the TSC, and the PDE is fostered by the common goals of providing education for PNG's children.

In the next chapter the structural dimensions of the interorganizational linkages among the NDOE, the TSC, and the PDEs are presented.

CHAPTER 5

STRUCTURAL LINKAGES

Structural linkages refer to the legal and administrative arrangements that are established to define the role relationships among the members of an interorganizational arrangement (Van de Ven & Ferry, 1980). This chapter is focused on identifying and analyzing the structural interorganizational linkages (IOLs) that govern the interaction between and among the National Department of Education (NDOE), the Teaching Service Commission (TSC), and the Provincial Divisions of Education (PDEs). The structural variables for analysis in this chapter include the basis of interaction, the degree of formalization, mandatedness, intensity, and centralization (see Hall, 1987; Marrett, 1971). This chapter addresses the second research question:

> **To what extent are the relationships between and among the NDOE, the TSC, and the PDEs mandated, clearly specified, and standardized?**

The data for this chapter are taken from the record of interviews; analyses of government documents including statutes, circulars, and minutes of meetings; and observational notes. The chapter is discussed in four parts. In part 1, the formal relationships are discussed, followed by a discussion of the informal and nonformal relationships in part 2. In part 3 discussion is centered around the structures and their influence on the IOL. In part 4 the findings of the chapter are summarized.

Formal Relationships

Formalization in this regard refers to the degree to which rules, policies, and procedures govern the behavior and activities of the organizations in the network. As Marrett (1971) suggested, the degree of formalization can be measured by the extent to which the exchange is given formal official recognition and the extent to which these relationships are coordinated. Van de Ven and Ferry (1980) proposed that in studying structural dimensions of IOLs, the research should attempt to identify the nominal classification of alternative types of structures. In particular, they identified formalization, complexity, centralization, and intensity as important variables that should also be measured to capture the essence of IOL network. Formal linkages are presented in this section under two categories. The first category of formal structures is called the *mandated* linkages and the other category is titled *operational* linkages

Mandated Linkages

The basis for the division of roles and functions in the provision of education in Papua New Guinea (PNG) is the Organic Law on Provincial Governments (Government of Papua New Guinea, 1977). This law provided for the establishment of Provincial Governments in PNG and the subsequent delegation of powers by the National Government. In relation to education, mandated linkages among the NDOE, the TSC, and the PDEs are governed by the provisions of the Education Act of 1983 and the Teaching Service Act of 1988. These acts state clearly the roles and functions of each of these organizations with respect to the operation of provincial high schools. Briefly restated, the NDOE is responsible for the preparation and overall supervision of the implementation of the national education plan and the provision of financial assistance to the PDEs for building and maintenance of provincial high schools. It is also responsible for determining the qualifications and standards required for the registration of provincial high school teachers, inspection of schools, and certification and assessment of teachers.

The TSC is responsible for the employment and discipline of teachers. It therefore has the final say on the appointments, promotions, transfers, discipline, suspension, and dismissal of teachers who are members of the Teaching Service.

The Provincial Education Boards (PEBs) have, among other functions, responsibility for the establishment of provincial high schools, for the day-to-day supervision of provincial high schools, and for the maintenance of school facilities. The PEBs are also responsible for the appointment, promotion, discipline, and transfer of teachers within the province. (The reader is reminded again that the day-to-day operations of the PEBs are carried out by the PDEs). Consequently, by and large, the behavior and the activities of each organization is governed by established procedures. As one senior official of the NDOE said:

> The formal linkages are part of the Teaching Service Act and the Education Act. For example, in relation to teacher appointments, you will find that both acts quote what the other is saying. The responsibilities of the Department, the PEB, and the TSC are all referred to in each act. And in the provinces where they have Provincial Education Acts, these also make reference to the 'mama' (mother) act; that is, the Education Act. So the linkages are there, and the problem may arise only if we make decisions outside of the legal framework. (ND-04)

In trying to outline the roles played by each of these organizations in the operation of provincial high schools, the Teaching Service Commissioner for Legal Matters identified some of the roles the three types of organizations play. He said:

> The main reason for having the TSC established was to administer the terms and conditions of service of teachers with regard to salaries, discipline, and other things. The TSC deals with the creation and abolishing of positions and also the reclassification of positions. It also determines the structure of the staff when new provincial high schools are established. The Department of Education is then released from [industrial matters] and concentrates only on curriculum development, inspections, building of schools, [and] enrollment. . . . The Provincial Education Boards are also the appointing authorities. They make sure that the appointments are done according to the directions the Commission issues. They make sure that staff facilities and general school facilities with regard to dormitories, classrooms, toilets, and so forth are built and maintained. (TS-01)

A close scrutiny of the legal delegation of responsibility shows that there are concurrent functions in which two or more of these organizations play a part. Furthermore, as organizations with responsibility for the provision of provincial high school education, there is a need for structures and strategies to promote interorganizational interaction. In the next part the major operational linkages as highlighted by the participants are detailed.

Operational Linkages

Operational structures are necessary to ensure that the activities of member organizations are linked to promote efficiency and effectiveness in the operation of provincial high schools. Indeed, under the provisions of the Education Act and the Teaching Service Act, both the NDOE and the TSC have issued circulars and instructions to the various educational authorities, including the PDEs, to outline the operational processes for accomplishing individual organizational responsibilities. These circulars and instructions include operational processes relating to matters involving staffing, students, curriculum, school finances, facilities, and the relationship with the community (see, for example, Department of Education, 1990). This part identifies some of the areas of formal linkages and describes the processes through which those particular relationships are acted out in real-life situations. Formal operational linkages are described under training, employment, and servicing of teachers' needs; formal processes of reporting; the process of disciplining teachers; the process for establishment of provincial high schools; and the creation and abolishing of positions.

Training, Employment, and Servicing of Teacher Needs

The training, employment, and the servicing of teacher needs represents a function in which all member organizations have roles to play. Whereas the TSC, as noted elsewhere, is the employer, the training function, both for preservice and inservice training, is an NDOE responsibility. The PDEs, on behalf of the PEBs, are responsible for taking action on decisions relating to the appointment, promotion, transfer, and discipline of teachers within their respective provinces. These decisions are then coordinated by the TSC. IOL issues relating to the teachers are many and varied. Thus, different subsections have been created to describe succinctly and present a holistic picture of the operational processes pertaining to the issues of training, placement, discipline, and dismissal of teachers.

Preservice training and registration of teachers. The training of teachers can be categorized into preservice and inservice training. In regards to preservice provincial high school teacher training, neither the TSC nor the PDEs have a say in who, how, or what qualifications should be required for provincial high school teacher training. This function is left entirely to the NDOE. As noted in the Education Act, the National Secretary of Education "is responsible for determining the qualifications and standards required for registration or provisional registration of teachers" (Government of Papua New Guinea, 1983, p. 25). The actual preservice provincial high school teacher training, however, is carried out by the University of Papua New Guinea. The NDOE is represented on the Faculty Board, which makes recommendations to the University Academic Board for the approval of teacher training programs offered by the Faculty of Education.

Graduating with a diploma or a degree in education is the first step in the process of being certified and registered as a provincial high school teacher in PNG. On graduation, the trainees apply for vacancies as advertised in the Special Education Gazette. Once a new graduate wins a position in a school, he or she is given provisional registration and appointed to the position on a temporary basis for up to three years. During this period the new teacher must go through inspections to be assessed for registration as a teacher. The inspection for registration is carried out by the Secondary Inspector, who is an employee of the NDOE. The inspections report is then presented at the annual Ratings Conference, where a decision is made as to whether or not the teacher has met all the requirements for registration. The outcome of the Ratings Conference, recommending registration or nonregistration, is sent to the National Secretary of Education, who will either endorse the recommendation or request a reassessment of the teacher. If the teacher fails to gain registration during the first year, he/she is inspected again in the following year as stipulated in the Secretary's Instruction Number 1/88. "Normally, when a teacher receives an 'Unsatisfactory' rating on either a Personal or Inspections Report, he *must* be inspected in the following year. Such an inspection is a compulsory [one]" (Department of Education, 1990, p. 29). If the teacher fails to meet the requirements the second time, the new teacher is informed that he/she will be deregistered. Should the teacher decide to challenge this decision, he/she has the right to appeal the NDOE decision at the National Court.

If the teacher is registered, he/she is issued a teacher registration certificate and from then on can apply for positions, "win them with tenure," and be entitled to all the privileges that go with the position, such as" fellow leave" entitlements. The teacher can also apply for a *personal report* for the purpose of gaining eligibility for promotion.

Inservice training of teachers. Human resource development (HRD) has become a major factor in the performance of organizations. According to London (1992), HRD activities are not isolated activities; they are an integral part of people's jobs. They encompass individual learning and team development. They include all modes of learning, not just classroom learning. Human resource development activities among the teachers in PNG are classified as *inservice training*. Under the provisions of the Education Act of 1983, the NDOE is responsible for the provision of inservice training for teachers. The Teaching Service Act of 1988 also states that the TSC would "advise the NEB on personnel aspects of . . . inservice training arrangements for the members of the Teaching Service" (p. 8).

Inservice training, however, is not carried out by the NDOE without the participation of the other organizations. As the organization responsible for inservice training of teachers, the NDOE is responsible for the development and implementation of inservice training policies. There is, however, a great deal of consultation and interaction among these organizations, as evidenced by the statement made by the Superintendent of the SDU: "We have direct communication and consultation with the TSC and the provinces" (ND-08). He explained that this consultation must occur before any major plans for inservice training are undertaken. The roles played by the TSC and the PDEs are identified by the Superintendent of SDU. He continued: "First the PEBs support the inservice training by recommending the release of teachers from their positions at the schools. The TSC then endorses this by releasing the teachers [from the Teaching Service]" (ND-08). This consultation among the NDOE, the TSC, and the PDEs is important for several reasons. One is that the PDEs are responsible for the day-to-day operation of provincial high schools. To ensure that there are enough teachers to maintain the continued operation of the schools, the Provincial Assistant Secretary of Education must indicate which teachers can be released to attend residential study sessions. The involvement of the PDEs is clearly spelt out in the *Secretary's Circular # 34* of 1987 (Department of Education, 1990). Another reason is that, as the employer, the TSC must authorize the teachers to be absent from their place of employment to attend inservice training. Thus, when the NDOE has identified teachers who must attend certain residential courses, their release must be obtained from the TSC in order for teachers on such study or training engagement to continue to receive their salaries and other entitlements.

Although inservice training is the NDOE's responsibility, change has occurred in the way both the PDEs and the TSC perceive their role in relation to it. According to the Superintendent of the SDU, there is now greater acceptance of responsibility and participation, especially by the PDEs. He explained that recently the TSC and the PDEs have realized that the NDOE alone cannot meet the demand for inservice training. Consequently, "the provinces have, in the last three years, accepted quite a bit of the training responsibility" (ND-08).

Advertisement, Recruitment, and Appointment of Teachers

The advertisement, recruitment, and appointment of teachers to vacant positions are tasks that involve all of the organizations in this study. In the following paragraphs the procedures followed in the advertisement, recruitment, and appointment of teachers to vacant positions are explained. The discussion highlights the roles that each of the member organizations in the study play with respect to the recruitment and appointment of teachers to provincial high schools.

Advertisement and appointment of teachers to vacancies with tenure. The advertisement and appointment of teachers to vacancies "with tenure" is a process that takes a year to accomplish and is repeated each year. All vacant positions in provincial high schools are advertised in a *Special Education Gazette*. This action is taken under the provisions of the Teaching Service Act of 1988 (Government of Papua New Guinea, 1988).

First, the provinces prepare individual Provincial Master Position Registers of all the high school teaching positions in the province by school. The register will show which positions are held on tenure and by whom, which are held on a temporary basis, and which are vacant. The provinces then send their Provincial Master Position Registers to the School Administration and Liaison Division (SALD) of the NDOE. The SALD compiles a Master Position Register (MPR) and sends it to the TSC. The TSC, in consultation with the SALD, compiles the *Special Education Gazette* to advertise all the vacancies. The *Special Education Gazette* is then despatched to the PDEs, which in turn forward them to the schools. The teachers apply for vacant positions. The applications for all the positions in a single province are received by the PDE on behalf of the PEB.

The second stage of the procedure involves the act of selecting and appointing teachers to vacant positions. The applications are sorted out according to the schools and sent to the Boards of Governors of the individual schools, who are the selection authorities. They make their selections and submit them to the PEB which performs provincial sorting to make appointment decisions. The PEB is the appointing authority and has the power to make appointments to the vacancies in the schools in that province (Government of Papua New Guinea, 1983, 1988). One of the major reasons for the PEB's scrutinization of the selection decisions by the Boards of Governors is to avoid appointing the same person to more than one position in the province. The appointment decisions of the PEBs are then forwarded to the TSC. Both the Boards of Governors and the PEBs, in carrying out their roles, are required to follow closely the processes set out by the TSC.

Based on the appointment decisions of the PEBs and the order of preference forms submitted by the teachers, the Central Sorting Unit within the TSC carries out the central sorting functions. The Central Sorting Unit checks that all the procedures have been adhered to by the selection and appointing authorities and that the same teacher is not offered more than one position. The system of deciding which position a teacher should be offered is determined by the preference listing of both the applicant and the appointing authority, with the teacher's preference listing playing the major influence. For example, Joe Blow applied for a position in school X in province Y and gave this position preference #1. He also applied for a similar position in school K in province L and gave it preference #2. Joe Blow was eligible to apply for these two positions. The appointing authorities of provinces Y and L gave first preference to Joe Blow. The TSC would award the position in school X in province Y to Joe Blow because of the higher preference he gave to that position. When the central sorting is completed, the TSC compiles the results of central sorting and publishes them in another *Special Education Gazette* called the *Confirmation of Appointments to Advertised Vacancies* and distributes it to both the NDOE and the PDEs. The publication of a *Confirmation of Appointments to Advertised Vacancies Gazette* confirms appointments with effect from the first of January of the following year.

The third stage of the appointment process involves teachers appealing the decisions of the appointing authorities. The teachers can appeal the appointment decisions after publication of the *Special Education Gazette* confirming the appointments. These appeals are forwarded to the TSC, which then looks into the merit of the protests. The TSC, as the employer, has the final say on the outcome of all the teacher appointment decisions. If it finds that errors have been made in not awarding a position to the appellant, it will overrule the decision of the appointing authority and award the position to the appellant.

Finally, when the results of application to advertised vacancies are published in the second *Special Education Gazette*, the teachers must follow through by taking up the positions they have won at the beginning of the next school year. The process of taking up these positions also confirms their rights of tenure to these positions. Once the appointment is confirmed, the teacher is awarded tenure for a period of three years. This tenure may be extended through application for and receiving of a *personal report* before the period of tenure expires (Government of Papua New Guinea, 1988). Where a teacher, having won an advertised position, fails to take up the position at the beginning of the next school year without the approval of both the PEB and the TSC, that teacher will forfeit his/her right to that position, and the position will be readvertised in the next round of advertisements.

The process of advertising and appointing teachers to the vacancies has caused a great deal of frustration among teachers and the PDEs. According to the Superintendent of Secondary Inspections:

> This exercise [of appointing teachers] has proven almost unsatisfactory, I should say, because every year we have complaints from teachers. For example, the teachers complain and say, "I am eligible, but I didn't win. How come?" They also cause a lot of frustration in the sense that teachers [through *personal reports*] are granted eligibility for promotion that lasts for two years. If they fail to win a promotion within this time, they lose their eligibility. Sometimes they don't win promotions because somebody may have made a clerical error somewhere. (ND-14)

One Appointment Officer in a PDE also echoed similar concerns about the process of making tenure appointments. According to this official, there are times when the provinces do not obtain the services of the teachers they appointed because "the TSC rejects the decisions that the PEB makes" (EP-02). According to the Teaching Service Commissioner for Legal Matters, one of the reasons that the provinces do not always get the teachers they appoint is lack of adherence to the procedures established by the TSC. In his words:

> The problem I see is that sometimes the appointing authorities are not following the procedures we set out in regard to appointing teachers to positions. Some PEBs are even appointing people without the required educational qualifications, and this is happening in one or two provinces. And so you can see that the procedures are not being followed by the appointment authorities in this regard. (TS-01)

The Chairman of the TSC also highlighted the fact that many provinces give preference to teachers from their own provinces when it comes to making appointment. He bemoaned "the reluctance by each province to recruit teachers from other provinces" (TS-03). He emphasized that teachers are national public servants and should be considered for positions in whatever province they want to serve. However, the reluctance by the provinces to recruit teachers from other provinces is caused by lack of funds. The Chairman of the TSC elaborated:

> I think the right reason may be the lack of funds to bring teachers in, because we say "There's a teacher available in Rabaul, or in Port Moresby. If you have a vacancy there, can you fly him across to your province?" They would say, "No, we have no money." (TS-03)

In-country recruitment of teachers. The major avenue for the recruitment of teachers within the country is accomplished through the *Special Education Gazette* that advertises the positions and the conditions of service in each school. Prior to these vacancies being advertised, there are also times when the provinces see it necessary to visit the teachers' colleges, speak to possible candidates, and encourage them to apply for positions in their schools. At the time of this research, the Superintendent of Provincial High School Operations in one province was visiting the University of Papua New Guinea (Goroka Campus) to recruit new graduates. According to the Appointment Officer of this same province:

> Finding teachers for provincial high schools is a problem for us from time to time. Sometimes we are faced with the problem of teacher shortage in provincial high schools. [To avoid this] the PEB made a policy decision about two years ago that if we are aware that in the coming year we will be short of staff, an official from the PDE has to make a trip out of the province to recruit teachers from institutions. Normally, the institution we visit every year is the University of Papua New Guinea (Goroka Campus). (EP-02)

When subsequent vacancies occur, the provinces can fill these positions in one of three ways. First, with the permission of the PEB, a school may advertise its vacant positions nationally in newspapers and invite applications. The Board of Governors makes its recommendations and forwards these to the PEB for approval. When the PEB approves, the TSC is informed and grants authority to the NDOE to put such appointees on the payroll.

The second method of recruiting teachers for subsequent vacancies is accomplished through the Senior Professional Assistant (SPA) for Secondary Liaison with the SALD. The Appointment Officer of the province will contact this person at the NDOE who will then note the vacancy and inform teachers who come to inquire about teaching positions. The SPA, Secondary School Liaison, with the NDOE described the procedures involved in directing teachers to subsequent vacancies in the provinces. According to him:

> When the monthly returns come in, I note where the vacant positions are on the board. When teachers come in to inquire about teaching positions, I point out to them where the vacancies are. If they want to submit their name for one of these positions, I give them a special form called *Intention to Teach in Provincial High*

> *Schools*. When they have completed this form, I look at them, and [following the preferences they indicate] I will then contact the Appointment Officer in the respective PDE and say to him, "I see in the monthly return from your office a vacancy in, say, Kupiano High School. Can you confirm whether that vacancy is still there or not?" If it is still there, I will ask him if they can take this teacher who has the qualifications to fill that position. The Appointment Officer will then speak with his Provincial Assistant Secretary of Education. If they agree to take on the teacher, I will ask them to send a formal offer to pass on to the teacher. (ND-09)

The third method involves provinces communicating among themselves to locate teachers who have not been appointed to any vacancies. This process also involves seeking professional advice from the Secondary Inspectors, as explained by one Appointment Office:

> But during the year we normally make telephone contact with our counterparts in other provinces to check if they are aware of any surplus high school teachers. When names are given to us, we ask our Secondary Inspector to give his professional input on the teachers whose names we receive from the other provinces before we make a final commitment to appoint the teacher. (EP-02)

Again the teachers recruited through the second and third methods also need approval from the TSC to be put on the payroll. The same process of informing the TSC of the names of teacher and the positions to which they are appointed is required. When this is accomplished, the TSC authorizes the payment of salary.

Overseas recruitment of teachers. The process of recruiting expatriate teachers involves the cooperation of both the PDEs and the NDOE. Because the needs for teachers are in the provinces and because the provinces pay the teachers' salaries, the PEBs decide how many expatriate teachers and in what subject areas they will be recruited. The NDOE, on the other hand, does the actual recruiting. As the educational arm of the National Government, it is responsible for recruiting teachers from foreign countries. The process involved in the recruitment of teachers from other countries was succinctly detailed by one Provincial Administrative Officer of a PDE. In her words:

> In recruitment of overseas staff, the provinces identify what subject areas they need staff in. We identify how many expatriates we want to recruit. Then we seek approval from the Provincial Department Secretary. When he approves, we inform the NDOE. The NDOE then advertises the vacancies overseas on behalf of the province and accepts the recruitment tasks, doing interviews and [making] selections. It then comes back to inform the province, saying, "We have this person; he can teach science and math," for example. If the province says, "Yes"

> and confirms that they want the person, the process of confirmation and ascertaining takes place for the teacher to be brought into the country. (EP-03)

Problems of Teacher Registration and Reinstatement

Whereas the process of registering new graduates is a straightforward matter, the same cannot be said for the registration of overseas teachers and the reinstatement of teachers who have previously resigned from the Teaching Service, through personal choice, and who are offered positions by the PDEs. One very experienced Provincial Assistant Secretary of Education who had served in several PDEs saw the problem in this way:

> When we want to recruit and re-instate teachers who have previously resigned, it takes a much longer process. I think it's because people in those positions are not responding to certain needs and certain requirements of the PDEs. Either they don't understand their role, or they are just not performing. When queries come from provinces to the headquarters, it takes much longer than we expect. One example is the recruitment of a resigned teacher back into the system. Another is the registration or provisional registration of [expatriate] volunteers who come into the system. They must go through teacher registration before they can join the Teaching Service, and when the registration is not done properly, it creates a lot of delays in processing of salaries. (AS-02)

A possible factor that causes this delay is that before the TSC can make a decision on the reinstatement of teachers after they have resigned, the teachers concerned have to be inspected by the Secondary Inspector, as shown in this statement made by the Superintendent of Secondary Inspections:

> In the case of a teacher who is deemed to have resigned or who has resigned and is returning, his documentation goes to TSC. The TSC will then write the Secondary Inspector, and ask him, "Please write a report on this officer. Tell us what he is like." (ND-14)

Because the process of carrying out an immediate inspection and submitting the results of that inspection takes time, it no doubt has an impact on the amount of time the TSC takes in making its decision. The problem, however, seemed to be exacerbated by claims that while the inspection was being carried out, the TSC had no communication with the PDEs to inform them of the causes of the delay.

Another factor that probably contributed to this delay is the TSC's preference for new graduates over the reinstatement of teachers who have resigned. The Teaching Service Commission Chairman stated that the TSC preferred new graduates to reinstatement of teachers who had resigned with the view to making use of the resources that the Government was spending in training new teachers. In his words:

> At one time, we made a strong rule that nobody should be re-engaged in teaching unless we approved his coming back. We had the understanding with the provincial authorities that anyone who resigned or anyone who was terminated and dismissed should not come back because we were getting new graduates from Teachers' Colleges. And we wanted to make sure that we utilized this new blood. . . . So we were discouraging the return of resigned teachers. We preferred new graduates because the Government is spending money to train them, and we felt that it would be a waste of resources if we spend so much money on training them and they didn't get employed. But the Provincial Assistant Secretaries [of Education] felt that we should not tell them who to appoint. So there are some of these vague areas where sometimes it may appear that there is no proper procedure for making decisions. (TS-03)

Formal Processes of Reporting the Operation of Provincial High Schools

The supervision of the operation of provincial high schools involves checking on how the schools are being administered, determining how the teachers are implementing the curriculum, and assessing the professional competencies of the teachers. The first mentioned is a PDE responsibility, whereas the supervision of the implementation of the curriculum is an NDOE responsibility. The assessment of teacher performance in theory is a responsibility of the TSC. In practice, though, the task of supervising the efficient and effective operation of the schools is carried out by the NDOE through the Secondary Inspectors. Review of the administration of the schools and of curriculum implementation is reported in what is normally called *advisory reports* whereas the teacher appraisal reports are referred to as either a *personal report* or an *inspection report*. Each of these is described below.

Advisory reports. The NDOE has a policy of maintaining and upgrading the quality of education thorough its Secondary Inspectorial System, that provides advisory visits to schools. Normally, two advisory visits each year are made to every school in the Secondary Inspector's region. During the advisory visits the Secondary Inspectors seek (a) to ensure that the correct curriculum is being taught to students; (b) to observe student learning; (c) to observe the teaching performance of individual teachers, discuss their circumstances, and tender advice regarding their work; (d) to discuss the overall school functioning with the school head; and (e) to compile a report for the use of the province and the school. The Assistant Secretary for Inspections and Guidance with the NDOE identified the people in the education system that receive the Advisory Reports:

> The other link would be the formal processes of reporting whereby Advisory Reports on how the provincial high schools are being administered are written by Secondary Inspectors. They are addressed to the [Provincial] Assistant Secretary [of Education], with copies to the Superintendent of Inspections here, to the school head, and the Board of Governors of the school. [The Advisory Report] would basically be a summary of the activities that the Secondary Inspector has been involved in during the school visit. (ND-03)

The Advisory Reports are intended to be comprehensive records of the functioning of the schools and the advice given by Secondary Inspector during the visit, together with recommendations to the school and the provincial authorities for action. The Provincial Assistant Secretary for Education is expected to read these reports and take action on those aspects of the school administration that need attention. However, the Secondary Inspectors have felt that the Provincial Assistant Secretaries of Education have not, in some cases, read the school reports, and hence, improvement recommendations made by them are not acted on. The Superintendent of Secondary Inspections bemoaned the fact that Secondary Inspectors become frustrated because issues raised in the reports are not attended to by many Provincial Assistant Secretaries of Education. He claimed:

> There are times when Secondary Inspectors have complained that certain issues raised in the Advisory Reports are not acted upon. For example, there are financial problems that schools go through and problems teachers face described in the reports. But they are not even looked at by the Provincial Assistant Secretary [of Education]. (ND-14)

One Secondary Inspector, in reporting his observation of reactions from the PDEs, also echoed the sentiments expressed by his supervisor. Positive reactions from the Provincial Assistant Secretaries of Education, according to him, are forthcoming only in the provinces where the PDE shows interest in the operation of provincial high schools. He stated:

> My observation is that in provinces where they closely follow [the operation of the schools], these provinces are able to take remedial action on issues we raise. You can see the effects in the changes to administration and the standards of physical facilities. (ND-15)

The implication from the above statement is that not all the Provincial Assistant Secretaries of Education take action on the recommendations in the Advisory Reports. The Superintendent for Secondary Inspections bemoaned the fact that after the Advisory

Reports are written, the Secondary Inspectors can do nothing but depend on the Provincial Assistant Secretary of Education for any action. In his words:

> School Advisory Reports are written for the Provincial Assistant Secretary [of Education] in the province. The Secondary Inspector hopes that the report is read [and follow-up action taken] and that the summary of the report and the actions taken are also presented to the Provincial Education Board for its information. (ND-14)

Some Provincial Assistant Secretaries of Education are seen by Secondary Inspectors as not taking the Advisory Reports seriously and hence as ignoring the problems of provincial high schools. Consequently, no improvement results from these recommendations. Thus the weaknesses in the operation of provincial high schools continue. In order to improve and promote greater attention by the Provincial Assistant Secretaries of Education, the Superintendent of Secondary Inspections suggested that these officials be made accountable to the National Secretary of Education and at the same time that they also be trained to read and act on reports:

> [If the power were given to] the National Secretary of Education, he might say to them, "It's a requirement that you will read the report and take action." I have a feeling that the Provincial Assistant Secretaries [of Education] do not take the school Advisory Report to be an important document. But it's an important document highlighting different situations in different schools. I don't think they see it that way. Therefore I think they need to be educated in the importance of the report because it has a lot of information that I am convinced the Provincial Assistant Secretaries [of Education] can be educated on. [They can be shown] how exactly an institution is operating. (ND-14)

Teacher Appraisal Reports

As one of its functions the NDOE, through the secondary school inspection system, has the task of providing professional advice and professional assessment of teacher performance. The appraisal of teachers' work is carried out by Secondary Inspectors under the provisions of the *Secretary's Instructions 4/84 and 5/85* (Department of Education, 1990a). There are two types of teacher appraisal reports: inspection and personal. Each of these reports has specific purposes, as described in some detail below.

Inspection reports. There are two kinds of inspection reports: the normal and the immediate. Once a teacher is identified for one of these inspection reports, the inspection is compulsory, and the teacher cannot withdraw from this process. Any inspection report that is not required urgently is called a normal inspection report. Such a report is needed for considering full registration for teachers on provisional registration and/or for reporting on expatriate teachers in their first year of teaching in PNG. The normal inspection reports also serve as the mechanism for checking on the performances of Teaching Service members where there are doubts about their level of efficiency, or to follow up on any teacher who was rated as unsatisfactory during the previous year. All normal inspection reports are presented at the Annual Ratings Conference.

An immediate inspection report, on the other hand, is one that is needed at a certain time, usually fairly urgently and for a specific decision. One use of the immediate inspection report is for considering an expatriate teacher for contract. An immediate inspection report may also be called for in disciplinary cases, where a quick decision is needed, or for providing information on a national teacher for promotional purposes as observed in the comments made by the Superintendent for Secondary Inspections. According to him:

> There are two main reasons for an immediate inspection report. One is for the Secondary Inspector to report to the Provincial Assistant Secretary of the PDE on the suitability of a teacher to perform duties at a higher level: to determine whether this person is suitable to do something other than teaching. Another use for the immediate inspection report is for disciplinary purposes. (ND-14)

Unlike the normal inspection report, the immediate inspection report is not presented at the ratings conference. Follow-up on this report is left to the office that requested it (Department of Education, 1990a).

Personal report. The procedures for compiling personal reports on all members of the Teaching Service are outlined in the Secretary's Instruction 4/84 (Department of Education, 1990 a). A personal report is written by the Secondary Inspector at the request of the teacher. The main purpose of the personal report is to enable teachers to gain eligibility status for promotion or to extend tenure to a position. A teacher who wants a personal report must apply for it by completing a standard application form. A member can withdraw his or her application for a personal report before or during the inspection visit to the school by advising the Secondary Inspector in writing. A personal report for gaining eligibility for promotion is presented at the Annual Ratings Conference, where it is rated in comparison with the ratings of other teachers at the same level. If the teacher is deemed worthy of promotion, the report is assigned a level of eligibility. The process for rating these reports is described in detail later in this chapter.

The structure and the process of compiling inspection and personal reports. All appraisal reports, whether inspection or personal reports, follow a standard format called the ED16. The content of the reports is also standardized as indicated on the

Secretary's Instruction 5/84 (Department of Education, 1990a). The report writer is required to ensure that the report include, (a) the duty statement of the level at which the teacher is working, (b) whether the teacher has such attributes as, among many, the ability to accept responsibility, (c) the ability to adapt resources to meet the needs of students and their courses, (d) the ability to think critically and make independent judgments, (e) the potential for personal and professional growth, and (f) the knowledge of the subject area that the teacher was engaged to teach.

The inspection visit may take place at any time, and the Secondary Inspectors will try to advise members in advance of their visits, but they are not obliged to do so. For normal inspection and personal reports the Secondary Inspector will usually pay two advisory visits prior to carrying out the inspection visit to write the report. In order to compile a full report, the Secondary Inspector is encouraged to "acquire as much written information and comments from as many relevant and appropriate sources as possible, in addition to the normal procedures. All written comments must be read and signed by the inspectee and the Secondary Inspector" (Department of Education, 1990a, p. 43). Although the Secondary Inspector alone will determine the content of the full report after all necessary consultations and observations, he must discuss the draft of the final report with the inspectee in the presence of the head of the institution before the Secondary Inspector leaves the school. The head is the administrative and professional leader of the school and as such is deemed to know what is going on. The head is also an important witness. At this interview the Secondary Inspector will establish the content and tone of the report that will be written. The final report, when completed, must be read and signed by the inspectee, the head of the school, and the Provincial Assistant Secretary of Education.

The written reports are presented by the Secondary Inspector at the Annual Ratings Conference. At this conference the report is discussed and given a rating. These ratings are then presented to the National Secretary of Education for final approval. The National Secretary of Education has the authority to amend or change the ratings recommended by the Annual Ratings Conference.

Reports rated as *satisfactory* do not require further action. Those that are rated *unsatisfactory* will require further action. The form of action to be taken on unsatisfactory reports may be recommended by the Annual Ratings Conference. It is then left to the appointing authority to ensure that the recommendations are carried out.

Teacher Discipline

Teacher discipline is another area in which the three types of organizations have been delegated roles to perform. As stated earlier, the TSC is the employer, on behalf of the

State of PNG, of all the teachers who are members of the Teaching Service. As such they are naturally responsible for the discipline of teachers. However, much of the task of teacher discipline is carried out by the NDOE and the PDEs. Under the provisions of the Organic Law on Provincial Governments the PEBs were also granted powers to discipline teachers (Government of Papua New Guinea, 1977). The Secondary Inspectors, on behalf of the TSC, are the charging officers; that is, they are responsible for laying charges against teachers for misconduct. After the Secondary Inspectors have carried out an inspection and written a report, it is sent to the Chairman of the PEB for presentation at the PEB meeting. The PEB will then consider the charges and recommend appropriate punishment. The PEB teacher-discipline decisions are subject to approval by the TSC. One of the main weaknesses in the process of teacher discipline that has led to numerous difficulties is the specification of roles that both the PEB and TSC should play in this function. There seems to be some confusion over the roles that these two organizations should play. A Secondary Inspector pointed out the confusion arises because of the fact that although the TSC is the employer of the teachers, the schools belong to the provinces. In his words:

> The TSC is the employer, and the teachers are their employees, . . . so when it comes to teacher discipline, the Secondary Inspectors are acting on behalf of the TSC [in laying] charges against the teacher, but the Teaching Service Commission is the only body that determines whether the teacher should be penalized or not. The link between the TSC and the provincial authorities must be clearly established because at the moment, although the TSC is the employer, it is not clear as to how it should react to the discipline decisions made by the PEBs. When the Organic Law on Provincial Government was passed, these functions were transferred to the provinces. Since then it became a lot more confusing. The provinces can claim that they employ teachers and they should discipline them. (ND-13)

Another Secondary Inspector described the process that is involved in charging teachers with misconduct. He said:

> Based on reports received from the schools, the Provincial Assistant Secretary [of Education] requests that I charge a teacher. After I charge the teacher, the report goes to the province for the PEB to look at. My job as a charging officer doesn't go beyond that, unless where a teacher is a suspended. In this case I would discuss with the Provincial Assistant Secretary [of Education] whether the teacher is suspended with pay or without pay. That's when I do follow-up. (ND-15)

As implied above, teacher discipline action is initiated by the Provincial Assistant Secretary of Education, but in his capacity as the chairman of PEB. When the Secondary Inspector has completed the immediate inspection report for the purpose of deciding on disciplinary action, that report is submitted to the Provincial Assistant Secretary of Education. If the Provincial Assistant Secretary of Education feels that disciplinary action is called for, the report is tabled at a meeting of either the discipline committee of the PEB or the full PEB for consideration. The role of the PEB is to make recommendations to the TSC as to what kind of disciplinary action should be taken against a teacher who is so charged. The TSC will make the final decision on whether to approve or reject the PEB recommendations.

As mentioned above, this has been a grey area. The PEBs have felt that their decisions should be final and that the TSC should not interfere with them. Consequently, the PEBs have often refused to adhere to the decisions made by the TSC. According to the Chairman of the TSC, the provincial authorities' refusal to implement TSC decisions in regards to teacher discipline was caused by "lack of understanding or lack of appreciation that the Teaching Service Commission is an authority that has the powers over these [discipline] matters" (TS-03). He added, "Where the Teaching Service Commission makes a direction, that direction is final; it must be implemented. The only way a provincial authority can stop the TSC decision from being implemented is to take the matter to the National Court" (TS-03).

From the perspective of the TSC, one of the problems associated with the process of carrying out the disciplinary functions was that the PEBs did not follow the requirements of the Teaching Service Act. The Chairman of the TSC described some of the most recent problems his office had experienced to make his point. In his words:

> The province wrongly terminated or put out three teachers; in fact, four. They suspended them or they charged them, but they had not done it in the right way. In one case they suspended a teacher. Before implementing that decision, they decided to lift the suspension and allow him to go back. But again, without implementing that decision, they decided to demote him and transfer him. . . . There is also another teacher within the same province who applied for leave of absence for something. The Provincial Assistant Secretary of Education at that time, not the current Assistant Secretary, approved the special leave in writing. While this teacher was away enjoying that leave, they thought that he had run away from work, so they charged him for being absent and subsequently terminated him. (TS-03)

The charging function, according to the Assistant Secretary for Inspections and Guidance, is an issue of some contention between the Division of Inspections and Guidance and the TSC. He explained:

> The TSC delegated this responsibility to us some years ago, after they had found that the charging functions were not really being carried out. There was a legal issue that the Provincial Assistant Secretary [of Education] was the same person who both laid and heard the charge. This was considered to be against the law. So that function was given to the Secondary Inspectorate, much against our will at the time. Now many Secondary Inspectors have come to grips with it, but many others consider that if they are working hard to move their role away from the appraisal role to the teaching, advisory, and mentor role, if you like, then it's a concern to be saddled with it. (ND-03)

He added:

> It's not a job anyone wants to do. It's not a job the provinces want to do; it's not a job the Secondary Inspectorate wants to do. It's a job that most of us would be very happy to see TSC do itself. It is their function, and whoever carries it out does it for them. So what I am saying, really, is that we don't want to do it, [and] they don't want to do it. There's no misunderstanding; it's just a job no one sees as central to their role. (ND-03)

The charging role also is not clearly understood. According to the Superintendent of Secondary Inspections, the confusion is related to the question of whether the Secondary Inspector should carry out the dual tasks of investigating and charging of teachers. He elaborated:

> Although the Secondary Inspector is the charging officer, just exactly who should carry out the investigation is not clear. It has not been clearly spelt out whether the investigation should be done by the charging officer or somebody else. So we have cases where the Secondary Inspector has gone out and done the investigation and charged the teacher. There are other cases where somebody else has done the investigation, come back and said, "Secondary Inspector, this is what I found." The Secondary Inspector then goes and charges the teacher. (ND-14)

Secondary Inspectors have experienced difficulties in the administration of the task of carrying out the charging function on behalf of the TSC. One Secondary Inspector ascribed these difficulties to the fact that although the TSC is the employer of the teachers, the PEBs are the bodies that offer the teaching positions to the teachers. Hence, there is vagueness in the structure of power relationships (ND-13). Thus, there is the issue of who has the power to authorize the Secondary Inspector to carry that function out when the need occurs, as demonstrated in the statement by the Superintendent for Secondary Inspections, who was once a Secondary Inspector himself:

> One time I couldn't get through to the Provincial Assistant Secretary of Education because he was not there. I thought, because [he] was not in the office, maybe the Senior Professional Assistant [the next in line] to Assistant Secretary would give me the authority. But he was not there too. No one would give me the authority, so I tried TSC and said, "I want you to give me authority to go and charge this teacher." The TSC said, "Yes, we'll do that." (ND-14)

Indeed, there is vagueness in the delegation of the teacher discipline function in both the Teaching Service Act of 1988 and the Education Act of 1983. According to the Teaching Service Act of 1988, the TSC is to exercise a critical oversight of all matters relating to the terms and the conditions of service and the welfare of members of the Teaching Service. It is the task of the TSC to ensure that decisions of other educational authorities under the Teaching Service Act or the Education Act do not infringe on or abrogate the rights or the conditions of service, of the members. And where those rights or conditions are infringed on or abrogated, the TSC is to give direction or take action to correct the situation. The provisions of the Education Act of 1983, on the other hand, make it clear that in relation to the members of the Teaching Service in the province, the PEB is responsible for disciplinary matters. Examination of both these acts does not clearly provide a demarcation of the powers associated with the discipline of teachers. The problems that have been experienced by the Secondary Inspectors, the Provincial Assistant Secretaries of Education, and the TSC are probably a function of this confusion.

Statistical Data Flow

As indicated above, educational development planning is a shared function of the PDEs and the NDOE. In order to accomplish planning functions, certain statistical data must flow from the provinces to the NDOE. These data should include what positions in the schools are occupied and by whom, and which are vacant; what the levels of the teaching positions are; how many students are enrolled in the school, what grades they are in, and their personal details; and the general conditions of the physical facilities of the schools. This information is communicated through monthly and quarterly returns by the schools. Because the administration of provincial high schools is a provincial function, the monthly and quarterly returns are forwarded to the PDEs by the provincial high schools. On receiving the school reports, the PDEs are expected to prepare provincial statistical data for presentation at their respective PEB meeting. A copy of this report is also expected to be forwarded to the NDOE. The Assistant Secretary for Inspections and Guidance, in identifying the linkage between the Secondary Inspectors and the principals of the schools, also pointed out the role that the NDOE plays in compiling the monthly and the quarterly reports:

> Our link, if you like, is kind of an assurance process whereby the Secondary Inspectors, in visiting the schools, would check whether they [the monthly and quarterly returns] have been completed and sent, and whether the information they contain is in fact a reflection of what is happening in the schools. (ND-03)

The participation by the Secondary Inspectors, in ensuring the statistical data flow, ends when the schools have complied with that requirement. Once the monthly and the quarterly returns have been forwarded to the PDE by the schools, there is very little else that the Secondary Inspectors can do to ensure that the PDEs pass these data on to the NDOE.

The NDOE requires these statistical data for several educational planning and decision making purposes. Consequently, the statistical data it receives must be factual, accurate, and up-to-date. The problem, as identified by several participants from the NDOE is not only that do many PDEs fail to submit these quarterly returns to the NDOE, but also those that are submitted are often found to contain inaccurate information. One of the planning activities in which accurate statistical data are most necessary is in the calculation and allocation of provincial school grants by the NDOE. The total amount of money a province receives depends on the number of students enrolled in its schools. The SPA for Provincial High Schools in the NDOE pointed out the importance of PDEs submitting accurate statistical data. He claimed:

> The subsidies that we send to them [provinces] are based on the enrollment figures they feed us. When they give us wrong figures, we end up giving them wrong amounts. When this happens they complain. And in the case of teachers, we want to know exactly how many vacancies are there so if teachers come to inquire about teaching positions, we look up and say, "Oh there is a vacant position here." Then we can liaise with the PDEs. (ND-09)

The above statement also identified the need to have accurate staff appointment figures so that vacancies can be clearly identified and teachers made aware of where these vacancies are. Thus, the sharing of statistical figures on teaching appointments is important to facilitate proper human resource deployment.

Building New Provincial High Schools

Under the provisions of the Organic Law on Provincial Governments 1977 (Government of Papua New Guinea, 1977) and the Education Act of 1983 (Government of Papua New Guinea, 1983), the establishment of new provincial high schools is a joint function of the National and Provincial Governments. To the extent that they do not require financial assistance from the National Government to do so, as pointed out by the Assistant Secretary for the SALD, the provinces, however, are free to decide whether or not to establish a new provincial high school and to determine where to establish it, when to establish it, and what size the school should be. In his words, "If they have the money, the provinces decide to build a new secondary school on their own; they can go ahead" (ND-06). However, Because of a lack of resources within individual provinces and the consequent need to engage its assistance, the provinces look to the National Government to help build the schools. The Assistant Secretary for the SALD also described the process involved in listing new provincial high schools in the National Educational Plans:

> The province should have a Provincial Education Plan, approved by the Provincial Executive Council, in which is indicated where they want the new school. The Provincial Education Plan is then submitted to the NDOE, which in turn takes it up with the National Executive Council. If the NEC approves funding for the school, it becomes the National Government's responsibility. The NDOE has to find the money to fund that school.
> (ND-06)

Thus, the provinces in the latter situation are involved in justifying the need for new provincial high schools, and the National Government provides funding for these schools. An explanation seems needed here. Because the National Government does not have funds available for this purpose, the typical pattern is to seek external assistance from international agencies, such as AusAID (Australian Aid), the European Union, and the World Bank.

The TSC plays only a minor role in the establishment of the new provincial high schools. As the schools are established, the TSC approves the staffing structure of the schools according to the information and data provided to it by the provincial and national authorities. According to the Teaching Service Commissioner for Legal Matters, there are standard procedures that can guide the provinces in establishing new positions in the new schools. He explained the process:

> The PEB should have its own planning committee, and its task is to plan how many new schools they should build each year over the [planned period]. And when a school is built, they follow our establishment structure to appoint, say, three teachers for the first year. When the schools are built they send the information to SALD, which then registers the schools and the positions. The newly registered positions are sent to the TSC to approve. When approved, the TSC [instructs] the data section to issue the school and position codes. (TS-01)

Once the new positions are given school and position codes, they are included both in the Provincial Position Register and the Master Position Register. These positions are then ready for inclusion in the next round of advertisements.

Creating, Abolishing, Upgrading, and Downgrading Positions

Provincial high schools do not remain the same after their establishment. In PNG the need for more provincial high school spaces is an ever-growing one. Thus, provincial high schools often expand beyond their original capacity to meet the popular demand for provincial high school education. Also, from time to time provinces may deem it appropriate to reduce the size of one school and expand another one. When this occurs, certain positions have to be abolished and others downgraded in the school whose capacity is being reduced, and new ones created and senior positions upgraded in the school whose size is being expanded. In regard to the creation of new positions and upgrading of existing positions, the Teaching Service Commissioner for Legal Matters explained the procedure:

> The creation of positions [in existing schools] depends on enrollment. Again, going back to the Provincial Education Plan, if the provinces increase enrollment in a school, they require additional positions. When that happens, they submit [their] request to us and we approve the establishment of those positions. (TS-01)

In order to facilitate smooth decision making with regard to creating new positions and upgrading existing positions, consultation among these organizations is seen by the PDEs to be most necessary. One Superintendent for Provincial High School Operations in one PDE maintained that it was important "to seek the opinions of the NDOE and the TSC in new developments so that we [PDEs] do not operate in isolation" (EP-05). In their effort to cooperate, the TSC is usually very supportive in approving the new positions. The TSC will approve the new positions as long as the province concerned is willing to fund them . In the word of the Appointment Officer from one PDE, "I think the most important thing is that it depends on the province. If the province agrees to allocate funds for the positions, normally the TSC gives the approval" (EP-02).

Informal and Nonformal Interorganizational Relationships

Within the framework of the legal and mandated formal interorganizational relationships, informal and nonformal linkages have continued to exist between and among these organizations in the operation of provincial high schools. *Informal* relations are defined as:

> personal interactions based on knowing each other as individual personalities [and] displaying spontaneity towards each other. They serve to satisfy personal goals. . . . In the informal relations a person can lay claim to the loyalty of another person as the basis for getting him [sic] to do something he wants or needs (Sayles, 1961, p. 95).

Nonformal relations are different from informal relations in that "they are always work oriented and designed to get the job done at minimum cost to the individual involved" (Sayles, 1961, p. 95). Nonformal relations, according to Sayles, "take into account some of the unanticipated social problems of relating to each other in the flow of work" (p. 96). In this part, some of the informal and nonformal interorganizational relationships as identified by the participants, are presented and discussed.

Informal Interorganizational Relationships

Informal interorganizational relationships occur among the members of these organizations in several ways. One major promoter of informal relationships is participation as members of Boards of Governors of provincial high schools or members of Boards of Management of primary schools, and as members of the parents' and citizens' associations of the schools where the children of the participants attend as exemplified by the Assistant Secretary for SALD:

> I think there are cases where people may come together at meetings of governing bodies of provincial high schools and community (primary) schools, that is not a day-to-day function of the Department. These are cases where people may meet outside of the day-to-day affairs. I am a parent, and I go to the relevant Board of Management meetings. I meet people there who would normally report to me if I am in the office. (ND-06)

One junior official in the NDOE identified four other factors that also contribute to informal relationships. These are being members of a church organization, being officials originating from the same province, friendship, and being a former member of the division. In her words:

> I think informal linkages occur because of our social contact within the church that we go to. But at the same time, I think, before [an official] became an Provincial Assistant Secretary [of Education] in the province, he was one of us in this Division, as a Secondary Inspector, so I also know him from that professional contact. I suppose coming from the same province also makes it easier for communication. I also know one or two other Assistant Secretaries personally too, like the Assistant Secretary in Manus province. I knew the family on an informal

> basis, as personal friends, before he became the Provincial Assistant Secretary there. (ND-11)

The Superintendent for Secondary Inspections observed that knowing an official as a colleague in the same Division prior to that person taking up a position in the TSC promoted better reaction and interaction between the NDOE and the TSC. Because this particular official in the TSC was once a Secondary Inspector, the Superintendent for Inspections found it easier to discuss with him issues relating to the terms and conditions of service of teachers.

Nonformal Relationships

At the time of data collection, only the term *informal* was used. However, during data analysis, it was apparent that some of the so-called *informal* interactions were in fact *nonformal*. As defined by Sayles (1961), these nonformal interactions are designed to get the job done quickly and efficiently. A great deal of nonformal interaction among these organizations was reported by participants. One of the contributing factors is that the great majority of people who are involved in interorganizational linkages reach their positions through the ranks of teachers. According to a senior official in the NDOE, this common bond promoted "good will" between and among the officials in these organizations. He elaborated:

> We've got a big *good will* thing between us and the Provincial Assistant Secretaries of PDEs. Because most of those Provincial Assistant Secretaries [of Education] are former teachers, even though they are working for the provincial departments, they still regard themselves as part and parcel of the whole education system. So we have . . . good interaction with them, in a relaxed atmosphere, discussing various issues. There is no infighting; there is no conflict. . . . We tend to regard each other as counterparts, although we are responsible for different functions. (ND-02)

This official added that because of the linkage through being teachers at one time or another, there is openness not only in discussing issues, but also in the ease of communication between his office and that of the Provincial Assistant Secretaries of Education. He continued:

> I can pick up the phone now and ring up the Provincial Assistant Secretary [of Education] in Milne Bay and ask him about what is happening there. And he will give that information to me very easily. He will not say, "No, I cannot give it to you because you are a National Department and I am a Provincial Department and therefore I am not responsible to you." He will give it to me with open arms. He will even fax it to me if I ask him to do so. That's particularly from my office. We

> have that good informal understanding between us. When I want information from them or if they want some advice, they ring my office any time of the day, and I will help them as much as I can. (ND-02)

A check on the backgrounds of all the Provincial Assistant Secretaries showed that, except for a few, the great majority of them as well as those officials from both the TSC and the NDOE reached their current positions after serving as teachers in schools.

Another senior official of the NDOE, in echoing similar opinions to those of his colleague, emphasized the importance of knowing who the officials are in the other organizations to facilitate action. He argued that because these officials know each other, any complaint is nonformally investigated before official action is taken. He explained:

> There is one particular example that I can give. We get complaints in relation to the high school teacher selection. To help the TSC confirm whether the problem is a real one or not, our Secondary Inspectors would check on these informally [nonformally]. After we get the background and the information required, we start taking formal action. So a lot of the communication is informal [nonformal] really. We know the Teaching Service Commissioner for Operations, we know who the Assistant Secretaries are, so we can deal with those problems anytime. (ND-04)

Likewise, the Superintendent of the SDU observed that because of personal familiarity, especially with the Provincial Assistant Secretaries of Education in the provinces, his interaction with them is more mutual and harmonious. He observed:

> If there is a problem I can ring up any Provincial Assistant Secretary [of Education]. Because I know them, I am able to speak to them. I listen to them and they listen to me when there is a problem, and it may be a very big problem, but when I talk with them, eventually we are able to minimize the number of issues involved. So person-to-person interpersonal linkage is effective between and among the three organizations. That has been one of the positive things I have found in my work within the Staff Development Unit. So it is important to establish person-to-person linkages and understanding with each other. (ND-08)

Nonformal relationships have been useful mechanisms for providing interorganizational assistance between and among the participating organizations, as implied in the statement made by the Teaching Service Commissioner for Legal Matters. He stressed that these nonformal relationships were always within the framework of the provisions of the Teaching Service Act. In his words:

> There have been instances where we have informal [nonformal] interactions. But I don't know if we can really strictly say they were outside of the legal framework. For example, if I was to be assisting someone in any of the Divisions, I would be

> assisting him in the same way as the legal requirements allow us to function. Yeah, and I think this is a matter of heart as to whether we do it or we don't. And if we did it, it was always within the spirit of helping one another to get along. I find it a bit hard to describe it as informal [nonformal] maybe in a sense, yes. I mean, that's a matter of personal judgment. (TS-01)

Voluntary Interorganizational Structures and Their Influence on IORs

Although roles and functions in regard to the operation of provincial high schools are clearly stipulated under the provisions of the Education Act of 1983 and the Teaching Service Act of 1988, voluntary interorganizational structures were also identified by the participants as playing a critical role in facilitating policy making and implementation within the whole education system in PNG. The researcher classified as *voluntary organizations* those structures that were not mandatory or called for under provisions of the educational laws. Two such structures, the Senior Education Officers' Conference and the Ratings Conference, appeared to be the most significant. These administrative structures are included in this discussion because their outcomes influence directly or indirectly the activities of each of the member organizations. Each of these voluntary structures was initiated by the NDOE. The role and the processes associated with each of these structures are detailed separately.

The Senior Education Officers' Conference

In interorganizational linkages Cook (1977) warned about the increasing concern over the duplication of organizational efforts overlapping domains of organizational activity, coordination, and integration of control over various organizational functions. Similarly, Rogers and Whetten (1979) noted how different social, economic, and political contexts and values affect the public service delivery systems. Public policy experts have also highlighted the importance of involving the implementers in the policy initiation and formulation processes in order to assure implementation (Lindblom, 1968; McDonald & Emery, 1987). Emery (1993) maintained that there is a need for careful consideration of institutional support for policy changes. In the operation of provincial high schools as well as in the operation of primary and other postprimary institutions, the Senior Education Officers' Conference has become an important organization for consultation and decision making. It is an annual conference attended by the senior officials from the NDOE and the TSC and by the Provincial Assistant Secretaries of Education. From time to time when major educational changes are being proposed or are being implemented, the major donors also send representatives to these meetings. This latter statement needs explanation. In

PNG major educational reforms are funded through assistance from international agencies, such as AusAid (Australian Aid). Consequently, representatives from such organizations are also invited to the Senior Education Officers' Conference.

The Assistant Secretary for Policy, Planning, and Evaluation with the NDOE noted the usefulness of these meetings in identifying operational problems at the provincial level. He elaborated:

> I think [the Senior Education Officers' Conference] is a very effective body because it is at this conference that we get to know what problems the provinces are facing. We get to know what issues are bothering them. . . . The Senior Education Officers' Conference also provides an opportunity for us to brief them about new policies and gives them an opportunity to question us. They will ask questions about things they are not sure of. (ND-01)

Similarly, a senior official of the NDOE highlighted the degree of debate, consultation, and interaction, especially with regard to educational reforms, that takes place at these meetings. In his words:

> At the Senior Education Officers' Conference we debate and discuss policies and issues, exchange information between the PDEs and the NDOE. As far as the Senior Education Officers' Conference is concerned, we have it annually since it was first introduced. We find it very useful. With the reform coming up, a lot of our time [in the recent meetings] was spent on discussing how we are going to put the reform into place, whether the provinces are ready to take it on or not, whether they've got their plans in place, and also what type of assistance we can provide in terms of expertise and funding to help the provinces put the reform in place. So, for the last two years the reform issue has been very high on our agenda for the Senior Education Officers' Conference. (ND-02)

In a similar vein, the Deputy Secretary of Education for Administration echoed the degree of influence the Senior Education Officers' Conference has had on the policies of the NDOE. According to him:

> They have a very great influence on how we shape policy and when we take decisions. For example, with respect to the future of Grades 11 and 12 schools, the thinking from the Provincial Assistant Secretaries [of Education] is that the Grades 11 and 12 schools, formally called National High Schools, should become secondary schools and be allocated to the provinces in which they exist. Now, that view is not fully shared by others who see that those schools have a different purpose. But if these Provincial Assistant Secretaries [of Education] stand firm and

> say that that is the way to go, there's a high chance that we will go that way unless the Cabinet instructs us not to. (ND-12)

He added that "these decisions [made at the Senior Education Officers' Conference] also hold longer because we reach them through consensus" (ND-12).

The officials from the TSC also find the Senior Education Officers' Conference to be a useful forum for testing and evaluating policies, as indicated in the following statement by the Chairman of the Teaching Service Commission: "That conference is a very important forum where the policies that we have are also tested, discussed, and if there is a need to review any, we review them" (TS-03). He added that participants in the Senior Education Officers' Conference are implementers of the TSC policies, and therefore their input is most valued. He elaborated:

> The Senior Education Officers' Conference is a very influential body because the people who are in that conference are actually implementers of our policies. When they implement a policy and think that it's not working, then it will only be fair for them to come and discuss that so that we know how to improve that policy and so on. So when we come together at these forums we discuss the matter, and they try to explain where they feel it ought to be changed and they pass resolutions. They certainly have an influence on the way we formulate our policies. (TS-03)

An Inspector with the TSC, although echoing the opinions of his superiors, added that the Senior Education Officers' Conference is also a forum in which the TSC is able to share with the participants the problems that it encounters:

> At these meetings we gauge the views of the provincial education personnel. If they identify a common problem [with regard to one of our policies], we come back to the TSC and reexamine our policies. Their comments often influence the decision we make here. We try to come up with policies which ensure that the problems as perceived by the Provincial Assistant Secretaries [of Education] are avoided. We also contribute at the conference as well. There may be problems we encounter at our office here, and we want to help minimize those too. So it is a two-way process. (TS-04)

The statement by this Inspector above is indeed a reflection of what goes on in these meetings. The researcher had the privilege of participating as a participant/observer in several of these meetings. In one such meeting, prior to his taking up a doctoral studies program, he observed the Provincial Assistant Secretaries of Education voicing their concern with regard to their ability and preparedness to take on educational reforms to which one senior official alluded above. During the data collection phase of this study the researcher was also an observer at the 1995 Senior Education Officers' Conference. He observed private discussions between individual Provincial Assistant Secretaries of Education and either the National Secretary of Education or the acting Teaching Service Commission Chairman. All of these discussions were found to be related to educational matters affecting the provinces. The individual Provincial Assistant Secretaries discussed with either the National Secretary of Education or the acting TSC Chairman issues that were affecting implementation of educational policies in their respective provinces.

The Ratings Conference

The Ratings Conference is also an annual event that takes place at the end of each academic year. It is a conference attended by all the Senior Primary School Inspectors, Secondary Inspectors, as well as Provincial Assistant Secretaries from the PDEs and selected senior officials from the NDOE and the TSC. The conference is generally confidential; thus, by practice, anyone who does not play a direct part in the conference is not permitted as an observer. In this meeting the personal and inspection reports on teachers are read and rated. It is also a meeting in which provincial high school issues are raised and discussed by the Secondary Inspectors and Provincial Assistant Secretaries. In general, and with respect to provincial high schools, the ratings conference is dominated by the Secondary Inspectors. This domination is probably because of the role the Secondary Inspectors play, as suggested by an high ranking official of the NDOE: "The Secondary Inspectors are basically there to implement the National Government and the Departments' decisions or policies. So they are also part of the group that can influence the policies" (ND-04). As Secondary Inspectors they are informed of the day-to-day behavior of the provincial high school teachers; therefore, they can express opinions on teachers' conduct. The Teaching Service Commission Chairman observed that "there is a tendency for the conferences such as [the Ratings Conference] to express feeling as to how teachers should act" (TS-03). Consequently, the TSC perceives the Ratings Conference as being useful for providing an opportunity for dialogue between them and the Secondary Inspectors.

The Ratings Conference provides a forum for new issues relating to the curriculum and curriculum implementation to be raised and discussed. It is also a forum in which decisions relating to the same are announced. For example, during the opening of the 1995 Ratings Conference the Acting National Secretary of Education announced the findings and the recommendations of the Inspections Review Committee Report (Department of Education, 1995). These recommendations were further discussed at the end of the Ratings Conference.

Perhaps one of the major characteristics of the interorganizational linkages between and among the NDOE, the TSC, and PDEs is the "togetherness" that is prevalent in the interaction that the researcher observed not only during the Ratings Conference, but at the Senior Education Officers' Conference as well. This togetherness was also reaffirmed in the opening speech at the Ratings Conference given by Baki (1995), who was the Acting National Secretary of Education at the time. In his speech he said, "Together we have come this far, and together we will go further" (1995, p. 1).

The Ratings Conference, however, is dependent on the availability of funds. Although it is meant to be an annual conference, from time to time this conference is not held because of a lack of finances as was the case in 1994. Among the recommendations made by the Inspections Review Committee was that regional ratings conferences would replace the national conference and that the regional conferences would be attended by Secondary Inspectors only. If these recommendations are implemented, it will leave out senior officials from the member organizations; and, consequently, this conference will no longer serve as an interorganizational linkage mechanism as it now does.

Chapter Findings

This chapter addressed the second research question, that sought to determine to what extent the relationships between and among these organizations are mandated, clearly specified, and standardized. The purpose of this part is to summarize the main findings of the chapter. These findings are summarized under each of the main sections of the chapter: Formal Mandated and Operational Linkages, Informal and Nonformal Linkages, and Voluntary Interorganizational Structures.

Formal Mandated and Operational Linkages

This study involved the analysis of interorganizational linkages within a legal framework. As such, it has clearly demonstrated that the roles and functions of each of the member organizations are tightly regulated under the provisions of both the Education Act of 1983 and the Teaching Service Act of 1988. The delimitation of responsibility to each of these organizations meant that operational structures had to be established to harmonize the activities of the member organizations. The analysis of the interview data shows that standard operational structures were established for just about every aspect of the interorganizational relationship. These included processes relating to the preservice and inservice training of teachers; advertisement, recruitment, and appointment of teachers to vacant positions; processes for reporting on the operation of provincial high schools; processes for the evaluation of the work of teachers; and processes for the exchange of information. These operational procedures are highly standardized, and in general interorganizational linkages are maintained with great intensity. Because of the greater responsibility it is granted under the provisions of the educational laws, and coupled with the strategic power it has to influence greatly the operation of provincial high schools, the NDOE appears to be the dominant organization in this interorganizational network.

Though in most cases the procedures set out to operationalize these functions have been successful to the extent that all the organizations were able to adhere to them, there have been occasions when role conflicts occurred among the participating organizations. In these cases roles and functions, though appearing to be clearly stated, were difficult to define. On other occasions the interpretation of the roles to be played by each organization, especially between the TSC and the PDEs, differed, consequently creating conflict between these two organizations.

The advertisement, recruitment, and appointment of teachers to positions in provincial high schools is a function in which all of the participating organizations play a part. It is one function in which major operational problems were reported, especially between the TSC and the PDEs. There is ambiguity in the provisions of the Education Act of 1983 and the Teaching Service Act of 1988. This ambiguity is played out when PEBs' appointment decisions are rejected or changed by the TSC. This state of affairs requires reexamination and redefinition of the roles and functions of each of these organizations with respect to the appointment of teachers to positions on tenure. These need to be clearly stated to avoid confusion and the delay that it causes.

Informal and Nonformal Linkages

In the PNG context, both informal and nonformal linkages, as described by Sayles (1961), are used, as evidenced in the responses of the participants. Informal and nonformal linkages were identified as having a positive effect on the effectiveness of the interaction between and among the operators in the member organizations. Informal linkages were identified in terms of after-hours activities of the participants. The participants established informal relationships through being members of Boards of Governors or Boards of Management of the schools that their children attended, as well as being members of the Parents' and Citizens' Associations of those schools. For some participants informal relationships were established with colleagues who were also members of the same church organizations. All of these relationships were seen to promote nonformal linkages between and among the operators. For example, several participants claimed that knowing the person in these various capacities made it possible for them to interact with that person in a more relaxed atmosphere than they did with others whom they did not know well outside their work place. Nonformal relationships, however, were promoted mostly through greater understanding of the reasons for interaction between and among the interacting organizations. The greatest factor identified by the participants as contributing to the shared attitudes and values that facilitated nonformal linkages was the teaching experience of the great majority of the operators. Many commented that because most of them reached their current positions through being teachers, this common bond made possible their cooperation and interaction.

One important impact of nonformal relationships was that operators were able to discuss issues with their counterparts from the other organizations "on an informal basis" before applying the official bureaucratic apparatus to formalize decisions. This kind of interaction, in the researcher's view, is typified by the "good will" that exists between the Provincial Assistant Secretaries of Education and the NDOE. In the words of a senior official of the NDOE:

> [There is a great deal of] good will between us and the Provincial Assistant Secretaries of Education. Because most of these Provincial Assistant Secretaries [of Education] are former teachers, even though they are working for the Provincial Departments, they still regard themselves as part and parcel of the whole education system. (ND-02)

Voluntary Interorganizational Linkages

As well as the presence of informal and nonformal linkages, this study also found what the author called *voluntary interorganizational linkages*. Two particularly influential organizations were identified: the Senior Education Officers' Conference and the Ratings Conference. The interaction in these conferences was intense and constructive. Of the two, the Senior Education Officers' Conference seems by far the more influential. The outcomes of these conferences greatly influenced educational policies and their implementation. Furthermore, a great deal of cooperation and interdependency was demonstrated during the meetings. The Senior Education Officers' Conference, in particular, helped promote cohesiveness within the education system. The researcher also noted that in the two meetings he observed, attendance by the Provincial Assistant Secretaries of Education was good. The cooperation and participation demonstrated in these meetings is well reflected in the statement made by the then-Acting National Secretary of Education at the opening of the 1995 Ratings Conference (restated to make the point): "Together we have come this far, and together we will go further" (Baki, 1995, p. 1).

The focus of this chapter was to determine the extent to which structural relationships between and among the NDOE, the TSC, and the PDEs were mandated, clearly specified, and standardized. The chapter examined and discussed the formal mandated and operationalized structures, informal and nonformal structures, and voluntary interorganizational structures. The discussion under these topics revealed that indeed the roles and functions of these organizations in the operation of provincial high schools are highly regulated and standardized. These formal structures, however, are supplemented by informal and nonformal linkages as well as voluntary structures. The voluntary structures, in particular, have proven to be a useful mechanism for formative as well as summative evaluation of national educational policies.

In chapter 6, the resource and information flows between and among the interacting organizations will be examined.

CHAPTER 6

RESOURCE AND INFORMATION FLOW LINKAGES

Process is conceptualized as the flow of resources and information between two or more organizations. *Resource flow* is defined as "the units of value that are transacted between organizations" and *information flow* as "the messages or communications that are transmitted between the organizational parties through a variety of media" (Van de Ven & Ferry, 1980, pp. 301-302). Analysis of the process dimension therefore is focused on the actual flow of resources and information, and the direction and frequency in which they flow between and among the member organizations. This chapter is focused on analyzing the resource and information flows between and among the National Department of Education (NDOE), the Teaching Service Commission (TSC), and the Provincial Divisions of Education (PDEs). It addresses the third research question:

> **In what ways do these organizations influence each other's activities with respect to the flow of resources and information?**

This task is accomplished through tracing the resource and information flows between and among the participating organizations. The chapter is presented in three parts. In part 1 resource flows are detailed. In part 2, information exchange is described, and in part 3, the findings from this chapter are summarized.

Resource Flows

As stated in chapter 5, the relationships between and among the NDOE, the TSC, and the PDEs are mandated. Consequently, they are governed by the laws relating to the operation of provincial high schools in Papua New Guinea (PNG). This part is focused on identifying the resources that flow between and among these organizations, the frequency with which they flow, the direction of the flow, and the period of time when most resource exchanges take place. This part also describes the resource flow problems and makes suggestions for their improvement.

Resources Shared

There is no reciprocal resource exchange between and among the participating organizations. There is, however, resource sharing among them. These resources can be categorized as human or physical resources. Human resource sharing involves utilization of expertise of one organization by another. Human resources, by far, are the most common resources shared. By and large, the PDEs depend on the NDOE for technical advice in several of their functions. For example, the Legal Officer of the NDOE is often used by the PDEs to advise them on the preparation of their provincial education acts, as indicated in the statement by one senior official of the NDOE:

> I think, in terms of technical expertise, provinces do utilize our planning and policy branch, especially in relation to the drawing up of their education plans and their education acts. It is a requirement that each province should have its own education act. Our Legal Officer has been helping the provinces to come up with their education acts. (ND-02)

Other experts the PDEs use include the NDOE Auditors, the Personnel Officer, the National Education Planner, and the Secondary Inspectors.

In general, there is very little sharing in terms of physical resources. Each organization receives its budget from either the National Government, in the case of the NDOE and the TSC, and the Provincial Governments, in the case of the PDEs, as shown in these statements. According to one Provincial Assistant Secretary of Education, "Exchange of resources between Waigani and the PDEs does not occur. Financial resources for the PDEs are acquired through provincial budgeting. We buy our own materials, equipment, machines and so on" (EP-01). Another Provincial Assistant Secretary of Education added that "there is very little resource sharing because we budget for all our teachers' salaries and all our materials. The only things we get from the NDOE are the curriculum materials" (CP-01). These statements would be true for the flow of physical resources from the two national bodies to the PDEs. The provinces receive curriculum materials including science and practical skills equipment as outlined by the Assistant Secretary for Policy, Planning, and Evaluation: "We supply them with curriculum materials . . . including science and practical skills equipment" (ND-01).

Of the little resource sharing that was reported, the NDOE officials are the main beneficiaries. According to the Assistant Secretary for Inspections and Guidance, the PDEs share money, office space, and secretarial services with the NDOE officials who are based in the provinces. In his words:

> I think the Inspections and Guidance Division receive from the provinces. We take . . . travel allowances the provinces would give to some of our Inspectors. We would often use office equipment, office machinery, and secretarial assistance in telephones, photocopying, those kinds of assistance. So we use those resources from the provinces, although they are not our exclusive support. We also have our own allocations, and the Inspector is given an allocation for those things, but as I

> said earlier, we are not funded adequately in order to make the travel that is required. (ND-03)

Physical resource sharing between the NDOE and the TSC is also very limited. According to the Assistant Secretary for Inspections and Guidance, "There is very little exchange of resources with the TSC" (ND-03). One senior official of the TSC, although agreeing that there is limited resource sharing, also identified the physical resources that the TSC is able to share with the NDOE. In his view:

> I think, to a large extent, there is very little resource sharing, but each year we share our vehicles. When the staff section or a particular section wants to get things done, the NDOE is not always able to meet their needs. So we allow our vehicles to be used by these people. We maintain that we should cooperate with the staff section and the department generally so that when we request assistance they provide us with [this assistance; for example], data on teachers' salaries. (TS-02)

Frequency of Resource Flow

The frequency of the flow of resources between and among the interacting organizations is dependent to a large extent on the availability of financial resources. The frequency of travel by the NDOE or the TSC has been limited, as evidenced in the statement made by an Inspector with the TSC: "We cannot travel because our budget limits us. We would like to go to the 20 provinces, but because of the shortage of money, we can't" (TS-04). Much of the human resource flow is from the NDOE to PDEs. Thus, travel for personnel is limited by the financial resources available to the NDOE, as indicated in this statement made by the Assistant Secretary for Policy, Planning, and Evaluation:

> In terms of technical assistance, especially in planning, we would like to help the provinces as regularly as the availability of funds permit. . . . On the average, I would say each planning officer makes about three visits per year to each province: the first at the beginning of the year, the second one in the middle of the year, and the third towards the end of the year. (ND-01)

In regard to human resource sharing, personnel from the NDOE usually go out to the provinces at the beginning of the year. But for internal audit purposes, the frequency and timing of the trips will depend on the need identified by the PDEs, as shown in this statement made by a senior official of the NDOE:

> For personnel matters, we do send out our Personnel Officer and others from the personnel staff section at the beginning of the year to help the PDEs sort out resumption of duty forms. We only send out internal audit officers when they are requested by the high schools or by the PDEs. (ND-04)

From the perspective of Secondary Inspectors, resource flow from the PDEs is most appreciated when they do not have any funds to meet their own expenses. Although there is no set time to make use of the resources from the provinces, the Secondary Inspectors need assistance from the PDEs mostly in January and February or at the end of the year. In the words of the Assistant Secretary for Inspections and Guidance:

> Right at the beginning of the year we often don't have funding. At that time we would often be using provincial vehicles in order to visit the schools. . . . So we will be very much dependent on them in January and February, or towards the end of the year when the money supply is short and the Inspectors need to get to the schools. But, [generally,] we make use of the PDE's resources really as the need arises I think. There is no set time for us to make use of their resources. (ND-03)

Direction of the Resource Flow

An analysis of the interview data resulted in Figure 6.1, which shows the resources that are shared and the direction of flow. In general, there is more human resource sharing than physical resource sharing. By and large, more human resources flow from the NDOE to both the TSC and the PDEs than in any other direction. In relation to physical resource flow, the flow chart indicates that more physical resources flowed from the PDEs to the NDOE than in any other direction. As mentioned earlier, these physical resources were spent on assisting the field-based national officials to do their job. There is very little resource flow, if any, between the TSC and the PDEs. The TSC perceives the teachers as their resources being utilized by the PDEs and hence claims them as a resource flow from that organization to the PDEs. The PDEs, on the other hand, do not share any of their resources with the TSC.

Problems of Resource Flow

The resource flow between the TSC and the NDOE is smooth. Because the two organizations are housed in the same building, exchange is smooth and inexpensive. Resource sharing between the two national bodies and the PDEs, however, is difficult. A study of the interview data identified several problems as having an adverse effect on the smooth operation of provincial high schools. These were inadequate funding, law and order problems in certain parts of the country, lack of capacity within the PDEs, and procedural difficulties. Each problem of resource flow is elaborated upon below.

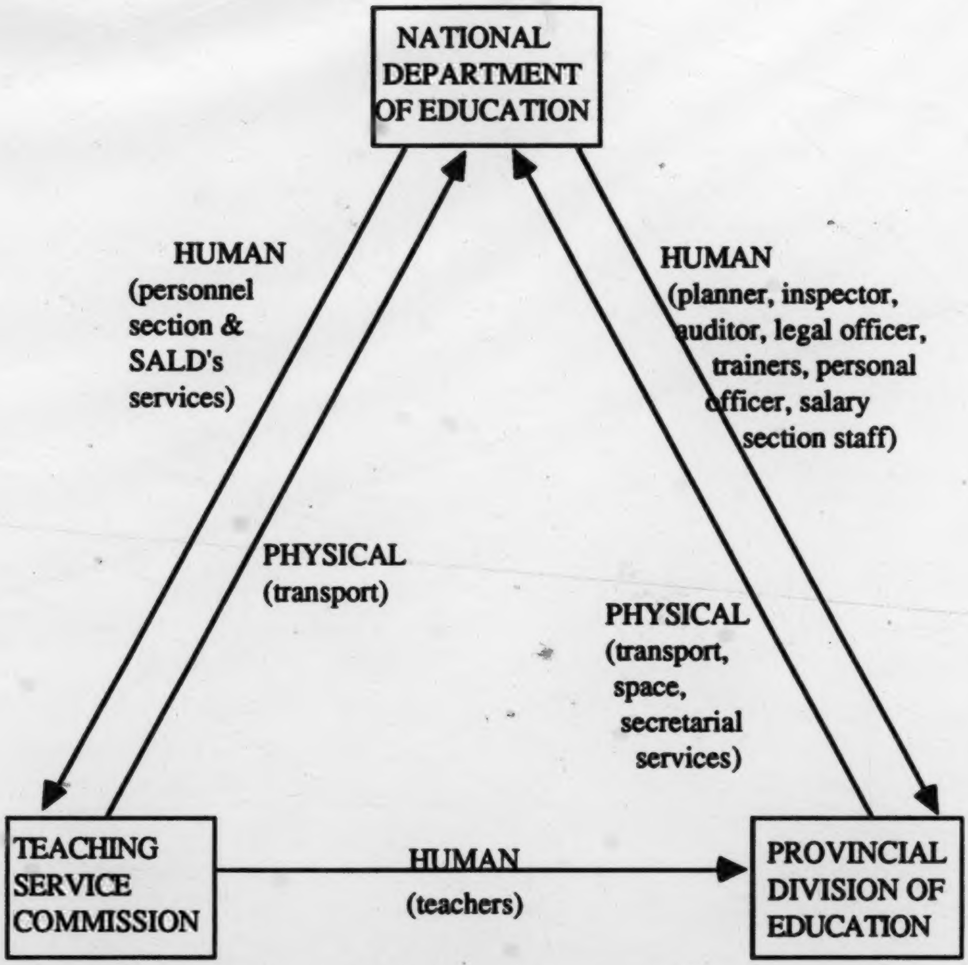

NATIONAL DEPARTMENT OF EDUCATION
HUMAN (personnel section & SALD's services)
PHYSICAL (transport)
HUMAN (planner, inspector, auditor, legal officer, trainers, personal officer, salary section staff)
PHYSICAL (transport, space, secretarial services)
TEACHING SERVICE COMMISSION
HUMAN (teachers)
PROVINCIAL DIVISION OF EDUCATION

Figure 6.1. Directions of resource flows

Inadequate funding. By far the greatest difficulty contributing to the slowdowns in the flow of resources is the inadequate funding of these organizations. The NDOE and the TSC receive their annual funding from the National Government. The PDEs, on the other hand, receive theirs from the Provincial Governments. The Provincial Governments also depend on the National Government for much of their funding. For the two national organizations, according to the Deputy Secretary of Education for Administration, "We are never in a position to provide for all the needs of the children in the provinces" (ND-12). The lack of adequate funding is perceived to be both an external and an internal problem. It is external in that when the National Government brings down the national budget, insufficient funding is allocated for education. The First Assistant Secretary for Finance and Administration elaborated:

> I think [the shortage of funds] has to be an external problem to the Department. In terms of finance, the amount allocated for education depends on the total economy of the country. So when the amount of resources available to the Department is restricted, then obviously we cannot find enough money to give out to assist the provincial high schools. (ND-07)

The lack of adequate funding is also seen as an internal problem, especially at the provincial level. According to one Secondary Inspector, the provincial priorities also affect the adequacy of funding for educational purposes. He explained:

> First we can say it's the National Government not allocating enough money. The other aspect is that the National Government allocates enough money. But because the provinces do not give high priority to education, they do not budget sufficiently for it. (ND-15)

The shortage of funds, however, is felt most by the NDOE, which has numerous functions to accomplish that require travel to the provinces. As indicated in Figure 6.1, the PDEs and the schools need the services of the National Planner, the Personnel Officer, the Legal Officer, and the Secondary Inspectors as well as the Guidance Officers. In the words of the First Assistant Secretary for Policy, Planning, and, Evaluation: "I think there are lots of implications for the two organizations. When there is not enough cash to go around, the operations of the TSC and the NDOE are severely affected. They cannot travel to conduct workshops" (ND-07). For example, except for the Central Province and the National Capital District, whose PDEs and the provincial high schools, in most cases, are accessible by road transportation, travel to all other provinces requires air transportation and hotel accommodation. The lack of funding therefore has effects on the operation of provincial high schools. From the perspective of inspections, one senior official of the NDOE stated:

> For our inspections system we don't have money at the level that is sufficient. Thus, we cannot continue to have advisory visits as required. Sometimes we have to cut down on these visits. Again the shortage of funds affects us. For example, last year there was no Ratings Conference. We would like to pick up the backlog. If we do not have the Ratings Conference this year, there will be a long list for 1996. (ND-04)

Until most recently, the Inspectors were able to receive adequate funding to carry out their functions and tasks fully. But since about 1993, when the National Government introduced the so-called "free education policy," the amount of money available to the

NDOE was affected, consequently influencing the ability of the NDOE to meet its obligations. The Special Project Officer with one PDE saw the shortage of funds for the Inspectors to carry out their duties as being a consequence of the National Government 's wrong decision. According to him:

> I feel that the National Government is busy taking over parental responsibility while neglecting its main areas of functions. While the money is pouring in, in big quantities to the schools for materials, the Inspectors are digging around for resources, for materials, for transport, for equipment, for facilities to allow them to move and do their work effectively. (EP-04)

The above statement should not imply that there is always adequate funding for each PDE. As stated elsewhere, inadequate funding is also felt by many PDEs. One major item in the PDEs budgets is the recruitment and employment of provincial high school teachers. Although the PDEs are able to budget adequately for teachers' salaries, they do not have funds to meet teachers' entitlements, such as recreation leave fares. Consequently, the PEBs tend to recruit teachers who are already in or from the province. The Teaching Service Commissioner for Legal Matters explained:

> One of the common problems, from the perspective of funding, is that a province that will want to recruit someone from another province may not even [consider] that person because they cannot bring him across. The movement of teachers from one place to another has been the biggest problem so far. It has resulted in a further interesting development where a lot of people who come from a particular province tended to swing back to their own province. . . . For example, a qualified person from Milne Bay Province may apply for a position in Manus Province. It doesn't matter how suitable the person is, he/she may never actually be appointed because the Manus appointing authority knows that appointing him or her is not going to land the teacher there. (TS-01)

One consequence of not appointing suitable and qualified teachers from other provinces is that the appointing authorities often end up appointing a teacher from within the province who is less qualified. The Teaching Service Commissioner for Legal Matters continued:

> And if there is no one from Manus who is suitable to be appointed at that level, for that particular vacancy, the position is held on an acting basis, and it creates a problem. I think nationwide I see that as a matter that is strictly developing from the money-supply problem. (TS-01)

Procedural difficulties. Procedural difficulties are other major contributors to slowdowns in resource flows. In this study procedural difficulties have been identified in the flow of physical and human resources. Difficulty in accessing resources has been experienced by both the NDOE and the PDEs. The Secondary Inspectors, who are located in the provinces, need to access funds from the NDOE. The process of accessing these funds includes the transferring of money to the Provincial Cash Offices from the NDOE. However, in relation to expediting cash flow from the NDOE to the Provincial Cash Offices, there were delays caused by the procedure that had to be followed to access the funds, as reflected in the statement made by the Assistant Secretary for Inspection and Guidance. In his view:

> Within our own Department we've had some difficulties in our cash flow, again not because the money isn't there, but even when it has been there we've had difficulties in creating warrant authorities, transferring that warrant authority to the provinces, and the Inspectors accessing that warrant authority from the provincial cash offices. So there are process difficulties as well. (ND-03)

The PDEs, on the other hand, experience problems in cash flow because of the slowness in the release of grants from the National Government. These grants to the schools are budgeted for in the National Government budget. The procedure is that the Finance Department would release the funds to the NDOE, which in turn would pay these moneys to the PDEs. When the grants are not flowing, there is nothing that PDEs can do but wait. The difficulties caused by the slowness in the release of these funds are well articulated by the Appointment Officer of one PDE:

> One problem, from my experience as the Appointment Officer for four years, is the slowness in receiving these grants. For example, the schools started off the 1995 school year without receiving their school subsidy. The smooth running of the institutions got interrupted because the schools depend on money, and with the little money they had, they started off well, but when it approached the middle of the year, they did not have enough money left to continue [operating]. (EP-02)

Another official within the same PDE, although acknowledging that the NDOE is quite efficient in releasing funds, identified the problem as being caused by the Department of Finance, which does not release the funds to the NDOE on time. In his words:

> I think the flow of grants from the National Department to the provinces and the schools has been very good. Our only problem is outside the control of the education system. Sometimes certain allocations for a certain category of schools do not come. But it is usually because the Department of Finance does not release the money to the National Department of Education. (EP-04)

Another function with which procedural difficulties have been experienced and which resulted in much frustration is in the processing of the teachers' fortnightly pays. At the beginning of the year the teachers complete the resumption of duty forms commonly known as the ED6 Form. These forms are then sent to the PDE for the Provincial Assistant Secretary of Education's signature. Afterwards, they are forwarded to the salary section of the NDOE to process the fortnightly pays. According to one Provincial Assistant Secretary of Education, completed documents often get lost within the NDOE, and consequently, the teachers are not paid on time. In his words:

> Processing of salaries is a big problem, and it is the concern that I share. I want to see that something is done with salaries so that all our teachers get paid immediately on the first pay day of the school year. You see, we complete the information in the provinces, but many times, when this information is sent down or physically brought down to the headquarters to be processed, we get responses back to my office saying, "No, we haven't got the information." But you see, we make it absolutely certain that these things get down to Port Moresby. Since the resumption of duties forms are not there, we have to fill in papers after papers after papers. (AS-03)

Process difficulties have also been experienced in the flow of provincial high school teachers. One of the problems identified is the long process to reinstate teachers who had previously resigned from the Teaching Service. The appointment decisions are made at the provincial level; reinstatement of a teacher, on the other hand, is a function of the TSC. Thus, certain documents to reinstate a teacher have to be completed by the PDEs and forwarded to the TSC for approval. The process, however, is long and cumbersome, as explained by one Provincial Assistant Secretary of Education:

> Some matters take longer, . . . [and] one example is reinstatement of teachers that have left the system, and the requirement of the Teaching Service Act allows them to come back. When we want to recruit and reinstate them, it takes a much longer process than what we expect. . . . When that is not done properly, it implicates a lot of things, such as a delay in the processing of salary payments. (AS-02)

The problem of bringing expatriate teachers to the provinces is another difficulty. The NDOE is charged with the responsibility for the recruitment of overseas provincial high school teachers. The PDEs, through their respective Provincial Departments, are responsible for offering contracts to the expatriate teachers. When these contracts are offered, final approval has to be given by the Department of Personnel Management (DPM). It is here that the longest delay is experienced. Yet the PDEs cannot directly make contact with the DPM. The Administrative Officer of one PDE bemoaned the problems experienced by her organization. She said:

> With the recruitment of contract officers, the delay is always with the DPM. We cannot go directly to them. We have to go through the overseas staffing unit with

> the National Department first; then they get the Staff Development Unit to take up the matter with the DPM. Sometimes it takes months. [Often] we have to fly someone down to Port Moresby just to follow up on [what I consider to be] a little thing. (EP-03)

Law and order problems. Law and order problems have had an effect on the movement of human resources. As a developing country, PNG has its share of breakdowns in law and order. In some parts of the country the problem is of such magnitude that it affects the quality of persons appointed as principals in provincial high schools. The law and order problems have also resulted in schools experiencing teacher shortages, as noted by one senior official of the TSC. In his words:

> Some of the schools are not receiving better trained teachers. And many schools are probably not getting fully staffed because of the situation they're in. Take Enga Province, for example. Because of the tribal fighting, staff seem to take off without informing the authorities. Consequently, there may be vacancies in the schools. (TS-02)

The law and order problems have also affected the placement of Secondary Inspectors. There were instances where Secondary Inspectors did not want to accept placement in areas where their security could not be guaranteed. The First Assistant Secretary for Standards identified such an area and explained the reason for not placing Inspectors there:

> I'm sorry to single out Enga Province, but let's put it this way: Not too many people want to work there, and that means when you can't base Inspectors there, the schools can't be inspected. It's been a problem for the last three years. We have not been able to place people there, we have not been able to send resources up there, and so it affects the smooth operation of the Department because you can't have reports coming in from these provinces. The problem has extended to all the Highland provinces. It is now extremely difficult to attract coastal people to work in those provinces. (ND-16)

Lack of capacity. Lack of capacity is prevalent in all the organizations. The lack of capacity was identified in terms of the number and caliber of personnel holding down strategic positions in these organizations. According to the Deputy Secretary of Education for Administration, the resource movements are affected by the lack of ability of the operators to carry out their functions. Often the operators fail to accomplish their tasks because they do not know what to do when faced with difficulties.

From the NDOE's perspective, the biggest problem preventing the flow of resources from the NDOE to the PDEs is lack of planning by the latter. The provinces are not able to come up with good education plans, which therefore affects the flow of resources. The Assistant Secretary for Policy, Planning, and Evaluation elaborated:

> Resources can flow on if we know exactly what the plans for each province are. . . . The resources may be here, but when we don't know the plans of the provinces, the resources that are here cannot be moved. Other resources can come from outside; we can negotiate [with donors]. But unless we know the needs of the provinces, we cannot negotiate with them. So I think the lack of planning is the main problem. (ND-01)

The minutes of the Senior Education Officers' Conference of October 1995 also confirmed the lack of capacity at the provincial level. With respect to the need to prepare provincial education plans to effect the changes in the 1995 Organic Law on Provincial and Local Level Governments, the minutes noted that there had been little progress made by many provinces on the completion of provincial education plans. Plans should have been submitted by the end of July 1995, but by October of that same year very few had been received. Those that were received tended to be incomplete and concentrated only on one aspect of the reform. Several reasons for provinces' difficulties were also noted. One of them was the inability of the provincial education planners to come up with 10-year development plans. The minutes of the Senior Education Officers' Conference noted:

> One doubts whether there is the expertise in many to be able to take on the daunting task of preparing a ten year education plan. An education plan is difficult enough to complete under normal circumstances but in a system that is both expanding and restructuring, the job is a mammoth one. It will be a full time job for a lengthy period of time for a planner to prepare an education plan. They should be given all the support that they require without being redirected towards other tasks. (Department of Education, 1995, p. 41)

The lack of capacity at the PDEs was also identified in terms of being relied upon. Further, the NDOE perceived the PDEs to be unreliable in two other areas. One of them involved the collection and distribution of resources to the schools. The Assistant Secretary for Policy, Planning, and Evaluation explained:

> The mechanism we employ for the distribution of curriculum material involves two means [of transport]: We ship by boat or by plane to the provincial locations. But then there is a problem at the provincial level. Often we send things out, and they sit for months in the provincial headquarters. Those things are supposed to be sent to the schools, but often they are sitting there. When we question the provinces, the popular response is, "Oh we have not got the money to do that." I think there

> are other ways of getting those things from the provincial headquarters to the schools. (ND-01)

The officials at the PDEs felt that the NDOE also lacked the capacity to meet a number of functions that it was expected to fulfill. Most concern was expressed in relation to processing teachers' salaries, as exemplified by this statement from the Provincial Assistant Secretary of Education in one PDE. According to him, there appeared to be lack of commitment among the workers who actually prepared the salaries and the supervisors who were responsible for ensuring that the work was done. He said:

> I think there are two things that slow down the salary process. The actual people who are working there need to be a little bit more responsible. Second, the people who are in charge perhaps are not very serious about their supervision and monitoring, because if they did supervise and monitor the flow of papers that come in, the salaries would be processed much quicker than they are at the moment. (AS-02)

Improving Resource Flows

Following the identification of problems that impinge upon resource flows, the participants were asked to provide solutions that could contribute to improvement in the flow of resources between and among the interacting organizations. Many suggestions were made. These were analyzed and fell into four categories of improvements: structural changes, better resource utilization, developing good education plans, and capacity building. Each is elaborated upon in the following section.

Structural changes to improve access and delivery. The need for structural changes to improve resource flows was advocated by many participants. The division of functions and the difficulties in coordinating the various organizational roles appeared to be the main stumbling block to the smooth resource flows. Some of these structural difficulties were recognized in the new Organic Law on Provincial and Local Level Governments, which led to recommendations for changes to some of the structures (Government of Papua New Guinea, 1995). These changes were being discussed at the time of this research. As stated elsewhere, the Provincial Governments, under the provisions of the Organic Law on Provincial Governments, had power to determine developmental priorities (Government of Papua New Guinea, 1977). Consequently, the priority given to education varied from province to province. This was seen to be an obstacle to equality in educational development throughout the country. Thus, under the provisions of the new organic law, the National Government is responsible for all educational policies; the Provincial Governments, on the other hand, retain administrative responsibilities. Resource allocation for education at the provincial level is to be dictated by the national policies. The Teaching Service Commissioner for Legal Matters, who has been a member of the implementation task force, elaborated:

> The flow of resources will also be ensured because the National Department is required, under section 80 of the new organic law, to be responsible for formulating all education policies. Funding will be dictated by the policy that will be nationally formulated, and so whatever is not within the policy may not even attract funding. (TS-01)

Among the Provincial Assistant Secretaries of Education the common perception is that the flow of resources, and indeed the delivery of educational services, would be much improved if they and their subordinates were answerable to the National Secretary of Education. To this effect, the Senior Education Officers' Conference of October 1995 passed a recommendation that read: "That the position of Provincial Assistant Secretary be [a] designated position" (Department of Education, 1995, p. 84). What this means is that if the Provincial Assistant Secretary positions are designated, the incumbents would be responsible to the National Secretary of Education. It would result in the creation of a single education department that would mean that the NDOE would not only make the educational policies, but it would also directly supervise the implementation process. According to the participants, this new structure would ensure that resources flow smoothly from one organization to another.

Another function in which structural changes were called for is in the processing of teachers' salaries. The process involved in getting a teacher on the payroll and paid every two weeks was outlined above. The difficulties involved in the current process of paying teachers is well documented. The intention at the time of this research was to decentralize this function to the provincial level. Reacting to this planned change, the Provincial Assistant Secretaries of Education agreed that decentralization of the teachers' salary responsibilities may be the solution to getting or delivering the pays to the teachers on time. One Provincial Assistant Secretary of Education added that it would also improve the supervision and record keeping. In his view:

> Definitely, yes, because, you see, in that way I can control the payment for teachers. If a teacher has not been performing for, say two weeks, and I know that, I can dock his pay straight away. Things like these are easy to control up here. But if it is in Port Moresby, as it is now, I can sign the Sick Leave Form here, but whether it gets actioned or not is something I can't be sure of. (AS-03)

However, not all the provinces have the capacity to take this task on, as noted by one senior official of the NDOE:

> Recently, because of the problems we had with teachers not getting paid on time, we've asked the provinces to take on some of that responsibility, particularly the paper work. But the processing of cheques and the printing of the actual amount of the cheque is done by us. . . . A lot of them can't because they . . . [don't have the] capacity. They don't have the trained people to do so. (ND-02)

Many PDEs indeed do not have the capacity to take on the responsibility of processing and delivering teachers' pays. For example, one Provincial Assistant Secretary of Education bemoaned the fact that his PDE does not have the office space nor the human resources to take over this task:

> The TSC approved for my province and others . . . to take over the teachers' salary responsibility. But because of lack of office space and manpower, we are not ready to do that yet. The TSC schould transfer this responsibility with the required budgetary and manpower support. (AS-04).

Better resource utilization. Improved resource utilization strategies were also recommended as means by which the resource flows between and among the NDOE, the TSC, and the PDEs could be improved. The need for improved resource utilization is perceived both at the macro and micro level. At the macro level the nation has to learn to manage its resources. At the micro level some of the individual organizations have to learn to make savings from limited resources through inexpensive delivery of programs. The First Assistant Secretary for Finance and Administration explained:

> I think there are two levels at which the resource flow improvements take place. First, there is a much broader issue of how the country as a whole must be able to manage its resources to live within what we have and not spend beyond our means. Internally, there is a lot of room for improvement in how we manage our resources. Take the TSC and the amount of money it gets. They could make savings if they tighten up or change the way or the manner in which they design their programs, the way they spend what they have, and the people they have. (ND-07)

Human resource utilization was also identified as a problem that could be improved upon. The concern was raised in relation to the failure of provinces to make available suitable positions for teachers who received management training through inservice courses. An Inspector with the TSC bemoaned the fact that quite often limited financial resources are expended in the inservice training of teachers by the NDOE, but not all of the teachers are given positions on their return. "The Commission is concerned about trained principals and deputy principals not being fitted in on their return to the schools [after successfully completing inservice courses]" (TS-04). Consequently, the knowledge and skills these teachers have acquired from these courses are not utilized.

Cost sharing or resource pooling was identified as another way in which resources could be better utilized. According to the Deputy Secretary of Education for Administration, the NDOE is never able to meet all of its responsibilities because of a lack of financial and other resources. He suggested that cost sharing or co-funding might be the solution (ND-12). One Secondary Inspector also thought that by agreeing on cost sharing, the resources made available to the Inspectors could be improved. He elaborated:

> I think adequate funding would be made available for services to be provided by the Inspectors if expenses in terms of transportation and clerical services for Inspectors are met by the PDEs and a closer working relationship between the provinces and the National Government was established in terms of resource sharing. (ND-15)

Good education plans. Among the problems identified as contributing to the slowdowns in the flow of resources is a lack of good educational plans at the provincial level. In order to plan the flow of resources, the PDEs need to come up with good developmental plans covering 5 to 10-year periods, outlining what they want to do in terms of developing schools. The solution to this problem, according to the Assistant Secretary for Policy, Planning, and Evaluation in the NDOE, is that there should be more face-to-face consultation between the provincial and national officials. In his words:

> The solution to the problem of planning would be for us to pay more regular visits to the provinces and maybe conduct inservice sessions or hold more consultations. Alternatively, instead of us going, we get the provincial administrators to come to the central base more regularly and attend workshop types of meetings to learn the needed skills. (ND-01)

Good educational plans in relation to budgeting for the movement of teachers is perceived by the TSC as most important in improving teacher utilization. The Teaching Service Commission Chairman elaborated:

> I believe that if they have proper plans in place indicating how many positions they have, how many teachers they need, and therefore make a budget accordingly, they will be able to staff their schools fully. The budget should also cater for interprovincial transfers as well. (TS-03)

Capacity building in the provinces. A capacity problem has also contributed to the slow movement of resources between and among the NDOE, the TSC, and the PDEs. Many participants proposed that inservice training be provided to improve the capacity of the various actors in the resource movement process. The Deputy Secretary of Education for Administration suggested that because resources are moved about by people, on-the-job-training for educational administrators and managers at all levels should be provided to give them the skills and knowledge to carry out this function with confidence (ND-12).

The First Assistant Secretary for Finance and Administration in the NDOE added that if the technical capacity of the PDEs could be improved, it would result in better planning and hence would attract donor funding. He suggested:

> The provinces . . . could improve a lot in terms of receiving resources from external sources by improving their technical capacity. Initially, I was talking about the shortage of qualified planners in the provinces. I think if the provinces have technically qualified people who know how to draft project proposals and cost them accurately, they can be used to attract donor funding. That is a way I think we can improve the resources flow. (ND-07)

There is a problem of lack of self-confidence among many of the officials at the provincial level. According to a junior official of the NDOE, there is a need to build up the confidence level of these people (Inspectors, Provincial Assistant Secretaries, and Principals) in order to meet some of the training needs that are prevalent in the system. Doing so will eliminate the need to depend on expatriates, who are more expensive to employ. One way to promote self-confidence within the existing national officials was for the NDOE to organize inservice training that would be delivered by these officials. (ND-08)

Summary

In the above discussion resources were identified in terms of physical and human resources. There is little reciprocal resource exchange among these organizations. Each organization is dependent on the budgetary allocations it receives from its parent body. Within this framework, limited resource sharing does take place, especially between the PDEs and the NDOE. The former is able to assist Secondary Inspectors and Guidance Officers, who are NDOE personnel stationed in the provinces. The PDEs' physical resource assistance is usually required by these officials at the time the Division of Inspections and Guidance is out of funds. Human resource sharing, on the other hand, is more frequent among the organizations. Generally, human resource flow originates more from the NDOE than from the others. Personnel from the NDOE are used by the other organizations to provide technical and legal assistance.

The resource flows between and among these organizations are hindered by several problems. These include inadequate funding, procedural difficulties, law and order problems, and lack of human capacity at the PDE level. The participants also suggested that these obstacles could be overcome through making structural changes to increase access and delivery of resources, better resource utilization, and capacity building.

Information Exchange

The nature of the interorganizational linkages and the dependency that is created through the division of roles and functions require that information must flow between and among the NDOE, the TSC, and the PDEs in order for certain functions to be carried out effectively. This part describes the information flow processes and is divided into three sections. First, the means, nature, and frequency of information flow are discussed. This is followed by a discussion of the problems impacting the flow of information in the second section. In the third section solutions to information flow problems are suggested.

Means, Nature, and the Frequency of Information Flows

This section identifies the means of information flow, the nature of information contained in the information means, and the frequency with which information flows occur. During the course of interviews the participants identified several means of communication that facilitated the exchange of information between and among the NDOE, the TSC, and the PDEs. The means of information flow are broadly categorized as *one-way written* (information provider) and *interactive* (two-way information exchange). One-way written information flows from one organization to another. There is little or no feedback. The examples of one-way information flow are reports, circulars and instructions, the *Education Gazette*, and the NDOE *Pipeline*. Interactive information exchanges are promoted through conferences, personnel visitations, and Secondary Inspectors. The nature of information transmitted in each means of communication and the frequency with which they were used are discussed individually.

Reports. Reports are the first means of communication. A number of reports were identified above. These included the monthly reports, advisory reports, quarterly reports, and quarterly returns. The monthly reports are prepared by the principals and sent to the PDEs and the Inspectors. They indicate the staff strength of the provincial high school at that point in time. They also give an indication of the teacher-student ratio.

The advisory reports are individual school reports written by the Inspectors and sent to the Provincial Assistant Secretary of Education for information and action. The following statement made by one Secondary Inspector shows the nature of information contained in these reports. In his words:

> In the advisory reports we provide information on individual schools to the Provincial Assistant Secretary [of Education]. We send copies to the Provincial Department Secretary and to our Superintendent. We include all sorts of

> information on enrollments, staffing, curriculum implementation, teaching effectiveness, finances, and student discipline. (ND-13)

The Secondary Inspectors and the Regional Guidance Officers also write quarterly reports. These are confidential reports written to inform the National Secretary of Education through the Superintendent on how educational matters are being attended to in the province. One Secondary Inspector explained:

> In the quarterly reports we give a summary of our observation of what is going on in the Provincial Education Office, the effectiveness of the organization and administration of schools, and curriculum implementation. We kind of provide a summary evaluation so that the Secretary has an idea of what is happening in the provinces. (ND-13)

The quarterly returns, on the other hand, are reports from the PDEs to the NDOE. The quarterly returns are perceived by the PDEs as very informative documents that provide an effective linkage between the PDE and the NDOE, as epitomized by statements made by two officials from PDEs. According to one Provincial Assistant Secretary of Education:

> The quarterly returns are very informative reports. They contain up-to-date information on statistics relating to enrollment, the number of classes per grade, and information on the development of education. In the North Solomon Province we seem to be re-opening schools every term, and quarterly returns seem to reflect the type of activities we are engaged in. (AS-01)

The Superintendent of Provincial High Schools in one PDE added: "I think that the quarterly return is a good instrument, . . . and we believe that this instrument has established the link the provinces have with the National Department" (EP-05).

Circulars and Instructions. These are the second means of communication identified by the participants. In general, Circulars and Instructions originate from either the NDOE or the TSC. By practice, the PDEs do not issue Circulars to either the NDOE or the TSC. Several types of Circulars and Instructions were identified. Most common are the Secretary's Instructions and Circulars and the Teaching Service Commission Instructions and Circulars. *Instructions* are communications from either the NDOE or the TSC that inform all other organizations of any new National Government policy with regard to the operation of provincial high school education. The Instructions inform all the interested parties of exactly what the new policy is, when it should be implemented, and under what authority the National Government made such a policy. *Circulars*, on the other hand, are used to communicate administrative decisions on what is to take place and how it should take place. According to the Deputy Secretary of Education for Administration, "On average, we would send six Instructions a year. We aim not to send too many Instructions because they may become less effective" (ND-12). The number of Circulars issued per year, according to the Assistant Secretary for Policy, Planning, and Evaluation, is not known. He explained: "It depends on whether there is a need for a Circular to be sent. But on the average, there would be somewhere around 20 to 25 circulars per year" (ND-01). The TSC Instructions and Circulars, on the other hand, are limited to teacher entitlements and expected behavior of teachers only (Department of Education, 1990). From the perspective of the TSC, the number of Circulars it issues varies from year to year, as stated by the Teaching Service Commission Chairman. He claimed:

> It varies very much. Some years we might send about four to six Circulars, and in other years it may only be just one or two. It depends on how frequently we change policies or how frequently we come up with new policies. (TS-03)

A variety of information is communicated through Circulars and Instructions, including matters relating to teachers, students, curriculum, school finances, school facilities, and school community relations (Department of Education, 1990).

Education Gazette. The third common information provider is the *Education Gazette*, which is prepared and distributed by the NDOE to the PDEs, the TSC, and other educational organizations. The *Education Gazette* used to be published monthly and carried a variety of information relating to the operation of the education system, as well as new pedagogical methods. More recently, the *Education Gazette* has been published quarterly. The reduction in the publication of the *Education Gazette* to a quarterly basis was seen as a consequence of a lack of finances.

NDOE *Pipeline*. A further common information carrier identified is the *Pipeline*, an internal NDOE news sheet that has become a common instrument through which important information is communicated to these organizations as well as others in the education system. The information contained in the *Pipeline* includes summaries of changes in policy, progress reports on certain projects, and matters relating to teachers and civil servants.

Conferences. Conferences are the fifth common means of transmitting information. They are particularly useful for communicating new policies and gaining first-hand feedback from the implementers. The most helpful conferences identified are the Senior Education Officers' Conference and the Ratings Conference. The Senior Education Officers' Conference is by far the more influential meeting. It is an annual event in which senior officials from the NDOE, the TSC, and the Provincial Assistant Secretaries of Education meet to discuss policies and issues of implementation. The Senior Education Officers' Conference is seen by both the NDOE and the TSC as an arena in which new policies and determinations can be explained and feedback on policy implementation easily made available through discussion, as noted by the Teaching Service Commission Chairman. According to him, "The Senior Education Officers' Conference is a means through which we actually communicate our policies with the Provincial Assistant Secretaries, where we discuss and get feedback on our policies" (TS-03). A senior official in the NDOE highlighted the usefulness of the contributions made by the Provincial Assistant Secretaries through the Senior Education Officers' Conference. In his words:

> At this conference we debate and discuss policies and issues. We exchange information between the PDEs and the NDOE. . . . We get very good input from the Provincial Assistant Secretaries. In fact, a lot of them contribute very good ideas about how things should happen at the provincial level. . . . They also tell us about the difficulties and the problems that they may or do face in trying to implement the policies that are decided by the National Government. (ND-02)

The Ratings Conference is also an annual event in which the Inspectors, Provincial Assistant Secretaries of Education, and certain senior officials from the NDOE and the TSC gather to evaluate the performance of teachers in the Teaching Service. It is also an important forum for announcing new policies and changes that will affect the work of Inspectors with teachers and principals. For example, during the 1995 conference, that the researcher attended, the results of the Inspection Review Committee were announced by the Acting Secretary of Education. The Ratings Conference also provides an opportune time to discuss issues relating to the processes involved in the evaluation and inspection of the work of teachers and principals.

Personnel visitation. The sixth means of information exchange is personnel visitation. These are situations in which specialists from the NDOE or the TSC visit the provinces and consult with the officials of the PDEs on a one-on-one, face-to-face basis. The visitors are able to communicate important information on happenings from the two national bodies to the PDEs. At the same time these officials also learn from the PDEs what is going on, and this information is conveyed to the significant others within the TSC and the NDOE on their return. From time to time officials from the PDEs travel to the NDOE and the TSC. They pass on information regarding educational activities at the provincial level. The face-to-face consultation or interaction among the operators from the various organizations is a useful method for obtaining specific information on certain interorganizational objectives. The NDOE officials who travel to the provinces include the National Education Planner, the Legal Officer, the Personnel Officer, Internal Auditors, and the Superintendent of Operation, Inspections. The Assistant Secretary for Inspection and Guidance gave an example of information flowing through personnel visitation. He said:

> We can't get to all the provinces each year because there are 20 provinces and we have a limited amount of money. So if one of the Superintendents or myself is visiting the province we'd normally expect that person to at least make contact with each of the Inspectors and Guidance Officers there. . . . It's normally an informal visit, but it is a good way of keeping contact. Anything that needs to be followed up with the other Superintendents and [other] officials can be detected. (ND-03)

Secondary Inspectors. A seventh means of information exchange are the Secondary Inspectors themselves. As mentioned in chapter 4 the Secondary Inspectors are national officials who are located in the provinces. Because of their roles and functions, they have intimate knowledge about what is going on in provincial high schools. Because of their proximity to the PDEs, they are able to keep abreast of developments in education in their particular provinces. The Secondary Inspector for Madang Province, in outlining the nature of their reports, showed how important the Inspectors are to the NDOE and the TSC for quick transmission of information. He said:

> We send several types of reports to the NDOE to keep them informed. Most of the time we go through our Superintendent, who is based in Port Moresby. We provide, first of all, a confidential quarterly report. That is the summary of our evaluation of what has been happening over three-month periods in the province. And we also provide specific school reports. Sometimes the provincial authorities do not provide this information to either the NDOE or the TSC, so we are also called upon by the TSC to provide data on the Master Position Register and student enrollment. (ND-13)

The Secondary Inspectors are also knowledgeable about what is happening in the NDOE and the TSC. They are quite conversant with procedures in relation to the operation of provincial high schools and are able to advise the PEBs and the Provincial Assistant Secretaries of Education on how certain issues might be attended to. The Secondary Inspectors indeed are a valuable link between the PDEs and the two national organizations.

Smoothness of Information Flow

By and large, there is constant information flow between the NDOE and the TSC, as observed by several officials. According to one senior official of the NDOE:

> We have a very good working relationship with the TSC. We share information with them. We even include them in the Senior Staff Meeting, that is the meeting of the National Secretary of Education with the senior staff in the department. (ND-02)

This view is confirmed by the Teaching Service Commissioner for Legal Matters, who said, "It's a daily thing, as and when required. There is very frequent interaction with the National Department" (TS-01).

From the foregoing it can be concluded that information flow between the NDOE and the TSC is regular and constant. It is also clear that there is a regular flow of circulars and instructions from the NDOE and/or the TSC to the PDEs. There is, however, very little or inconsistent flow of information from the PDEs to the NDOE and/or the TSC. This statement made by a senior official in the NDOE is reflective of the views expressed by participants from the NDOE and the TSC:

> At the provincial level, because they [PDEs] deal with their province, I guess we don't get much feedback from them. Some provinces submit their minutes of the PEB meetings to us to see what is discussed at the provincial level and what is being implemented. But most provinces don't do that. So from us to them, I think many of them get the input. They are informed about the national policies. But we do not get much input from them. (ND-02)

This official continued:

> I think sharing of information is something of a problem for us. We ask them to give us some research data on enrollment, movement of teachers, teachers leaving the province or resigned teachers or even the number of schools, for example. We receive these late from some of them, and sometimes we don't receive them at all from others. (ND-02)

Problems of Information Flow

Information does not always flow smoothly between and among these organizations, especially between the two national bodies and the PDEs. Several factors hindering the flow of information were advanced by the participants. These include structural difficulties, lack of capacity, lack of funds, and the question of whether the circulars and instructions are read and disseminated. Each of these obstacles contributes in different ways to hinder the smooth flow of resources, as elaborated upon in the following paragraphs.

Structural difficulties. As stated in chapter 5, the roles and functions of each of these organizations are stipulated in both the Education Act of 1983 and the Teaching Service Act of 1988. In many functions, there are concurrent roles. The sharing of functions, according to Songo (1978), is to promote "sharing of power rather than acquiring of absolute power" (p. 277). Different officials and different bodies are given carefully delimited powers over particular functions. To complicate the situation further, the PDEs are answerable to the Provincial Governments, whereas the NDOE and the TSC are National Government arms. Although the two education laws call for consultation and interaction, there is no provision in any of the education laws as to how these educational bodies could ensure regular and consistent flow of information between the national bodies and the PDEs. One senior official in the NDOE explained:

> One of the bottlenecks in our system is that people in the provinces consider that they belong to the Provincial Government. They are in fact appointed by the Provincial Government to be their public servants. We are never responsible for their appointment and therefore are looked at as outsiders. And in terms of accountability and reporting, they have no obligation to report to us. They have to report to their provincial bosses. For example, the Provincial Assistant Secretary of Education reports directly to the Provincial Secretary because he is the boss in the province. (ND-02)

Although operational procedures are in place for the PDEs to feed information to the NDOE and the TSC, these are not always adhered to by many PDEs. Because there is no legal provision to force the PDEs to furnish the NDOE with information, the NDOE depends on "good will" to receive important information. This official continued:

> Since they are responsible to the Provincial Government, their responsibility to us is basically from "good will." I cannot direct the Provincial Assistant Secretaries of Education to give me the information I need. I cannot discipline them either. There is nothing in the act to compel them to supply that information to me. (ND-02)

The Teaching Service Commissioner for Legal Matters concurred with the NDOE official. He argued that because the PDE officials see themselves as Provincial Government employees, they tend to treat national officials as outsiders. He explained:

> Because of the kinds of divisions that we have in the system, the provinces feel like they are independent. . . . There is a tendency to say, "I'm on this side, and they are on that side." When you go to a province, you feel that you are not quite welcomed. I'm telling you what I felt. You feel that you are not quite wanted and you get all sort of funny feelings. Yet this should not happen because in the way of functions, the TSC is responsible for all the teachers throughout the country. (TS-01)

The Provincial Administrative Officer from one PDE, in agreeing about the lack of flow of information from her PDE to the NDOE, added that she could not see any reason that the same reports that are submitted to the Provincial Department could not also be sent to the NDOE and the TSC. In her words:

> We have the Provincial Assistant Secretary [of Education] submit quarterly reports for the whole division to the Provincial Secretary. I don't see any reason why we should not submit the same reports to the mother department and the Teaching Service Commission as well. I don't see that happening here. (EP-03)

Lack of capacity at the PDEs. Lack of capacity was identified earlier as a factor that caused slowdowns in the flow of resources. It is also identified here as one of the contributors to inconsistent information flow. A senior official of the NDOE postulated that the capacity of the staff who are appointed to the position within the PDEs influences the flow of information from the PDEs to the NDOE. He argued:

> I think it's a capacity problem. It also depends on the Provincial Assistant Secretaries of Education, who are also the Chairmen of the PEBs. In terms of capacity, if they have a good executive officer or if they've got good staff on the ground, the copies of their PEB meeting minutes should be sent to the Chairman of the NEB or to the National Secretary of Education for perusal and information. When they keep that going, we will get regular input from them about what is happening on the ground in relation to some of the decisions of the respective PEBs. (ND-02)

Not only do the officials at the PDEs lack the ability to maintain information flow with the NDOE, but one senior official of the NDOE observed that in many cases the PDEs also lack personnel to take action on the information that is being sought: "There are some difficulties. Sometimes we require the information in the first quarter, but it does not come until the second quarter. At times the provinces do not have anybody to get the job done" (ND-04).

One major problem associated with the lack of capacity at the PDEs is the rapid turnover of Provincial Assistant Secretaries of Education and their subordinate staff. According to a senior official of the NDOE:

> The mobility of staff in some cases is unbelievable. Thus, the directive to send PEB minutes to us may have been previously given, but because of the constant movement of staff, it has not been followed through, and therefore we don't get that input. (ND-02)

In addition to what his colleague said, another senior official of the NDOE suggested that the Provincial Assistant Secretaries of Education need to remain in those positions long enough to internalized the information linkage system between them and the NDOE. In his words, "There is also regular turnover of Provincial Assistant Secretaries of Education. The person has to stay longer in the province to establish himself. Once he establishes himself, information that we call for will come quickly" (ND-04).

As alluded to in chapter 4, the rapid turnover of Provincial Assistant Secretaries of Education has also resulted in the appointment of staff to PDE positions who have no teaching experience. This, argued the Teaching Service Commissioner for Legal Matters, leads to "situations where people lacking understanding of the Teaching Service and the Education Acts are appointed, thereby causing breakdowns in communication" (TS-01).

Lack of finance. The lack of financial resources was identified as another major cause of poor information flow. One factor is that the major communication instruments identified above need financial resources to make them functional. Many participants commented that because of a lack of finance the frequency of information flow has been negatively affected. For example, the Teaching Service Commission Chairman bemoaned the fact that because of a lack of funds, the *Education Gazette* is now published on a quarterly basis, which means that his organization has less space in which to communicate important information. In his words:

> I think because of money problems, the *Education Gazette* is printed on a quarterly basis now and not on a monthly basis. The *Education Gazette* is actually the Education Department's official communication medium with the people, with teachers, and they usually allocate us a page or two. If we have circulars on retrenchment, readmission, promotion, or new positions of appointment, we would give these to them, and they would include the whole copy in the *Education Gazette*. This would go out on a monthly basis, but now it's done either on a quarterly basis or not at all. (TS-03)

In a similar vein the lack of funds has forced the TSC to change its method of getting circulars to the provincial high schools. The Teaching Service Commission Chairman explained:

> With the money problems, I have my doubts about whether our circulars reach the people we want to reach. The Commission circulars we issue are not intended for educational authorities only. They are also intended for teachers. Do they get there at all? One of the things we do, because of limited funding and resources here, is that we send out a handful of these circulars to the provinces with the hope that they reproduce them and distribute them to the schools. From the kind of feedback we receive in meetings, we gather that these circulars are not getting to the schools. (TS-03)

The funding problems have also affected the work of a number of NDOE divisions in their efforts to generate information on how educational policies are being implemented. The Assistant Secretary for Inspections and Guidance pointed out that the lack of funds does not allow the Inspectors to get to the school; thus, they cannot write the school reports and the quarterly reports. He said:

> When the system is fully functioning the problems are minimal. By that I mean the Inspectors can get to the schools, they can write their reports, the reports can be distributed, but sometimes funds are not there for the various activities to take place. (ND-03)

In a similar vein, the Superintendent for Secondary Curriculum claimed that a lack of funding has resulted in many curriculum workshops not being held, preventing the Curriculum Division from gaining first-hand feedback from the field officials. He elaborated: "Lack of funding sometimes restricts us from mounting workshops. This year and last year we were not able to do a lot of workshops, which are our links to finding out information" (ND-10).

Lack of dissemination of information at the provincial level. Another common obstacle to the smooth flow of information from the two national bodies to the PDEs is the question of whether the circulars are read and understood by educational authorities at the provincial level. Some officials at the NDOE and the TSC claimed that, based on the feedback coming to them, the circulars are not being read and the information dessiminated. The Teaching Service Commission Chairman, for example, was adamant, saying, "Most definitely, there are problems like information not getting through to the PDEs or to the schools on time or information received is not read or implemented" (TS-03). The Chairman further explained:

> When we send out the *Special Education Gazette* containing various types of information about certain positions, we expect the PDEs and the members of the governing bodies to read it before they make appointments. There are very clear guidelines in the *Gazette,* but when it gets there, many people don't seem to know the importance of these. They seem to go straight to the positions because they are interested in the positions. When the results come here we realize that they have not read the instructions. (TS-03)

The Chairman continued:

> Another case is that the NDOE sends out the Gazette on courses, but the PEBs that endorse the teachers' applications do not seem to know the conditions that need to be fulfilled by teachers. So here they appoint or endorse somebody to come for studies, only to realize later that he has problems with his family. (TS-03)

The Superintendent of the SDU in the NDOE agreed with the Teaching Service Commission Chairman, adding that although circulars are going out to the educational authorities in the provinces on a regular basis, "the people don't read them, or if they read them they don't pass on that information" (ND-08)..

Improvement to Information Flow

In the preceding paragraphs the major communication flow problems identified by the participants were outlined. In this section solutions to the communication problems, as perceived by the participants, are briefly discussed. These solutions include the modernization of communication technology, inservice education to increase the abilities and the capacities of the operators at the PDEs, structural changes, and forums and visitations. Each of these suggested solutions is described below.

Modernizing communication technology. At the time of data collection for this study, the means of information exchange, as identified in this chapter, consisted of conventional modes of circulars, instructions, and face-to-face interaction among officials from different organizations. Although these eventually enable the information and the messages to get through, they take a long time and there are occasions when there is doubt as to whether the information reaches all the people targeted. Many respondents therefore suggested that introduction of a computerized information system would improve the flow of information between and among the educational organizations. For example, one Provincial Assistant Secretary of Education suggested that the establishment of an on-line information data system would definitely improve communications. He explained that "if the education system had a computerized information set up, the monthly and quarterly returns could be easily accessed by the [participating] organizations" (AS-03). The need for the establishment of a computerized information system was also recognized by an Inspector with the TSC. By inference, a computerized system would not only result in instant information flow, but it would also result in more accurate data being made available. In his view:

> I like to see that the whole [information] system is computerized because it is very important that we have information right there. At this stage the data section of the NDOE is giving us information, but at a very slow pace, and some of the information they give us is not relevant to what we need. (TS-04)

The First Assistant Secretary for Finance and Administration acknowledged that the NDOE is aware of the need for the development of an information management system and explained what is being done to achieve this. He stated:

> I think the idea that our communication section has been trying to develop to improve the system of exchanging information between provinces and us is good. We are hoping that through the AusAID [Australian Aid] project, we will develop a

> management information system in the Department that will provide for easy access to information. (ND-07)

Improve PDE capacities. The interview data seem to suggest that slowdowns in the communication process are caused by a lack of capacity at the PDE level. This lack of capacity is a reflection of both a lack of manpower and a lack of knowledge and ability of the operators. The lack of capacity at the PDEs is recognized nationally as a bottleneck to information flow. Many aspects of the lack of capacity were highlighted by the participants. They also made suggestions about how the capacity problem might be improved. One experienced Provincial Assistant Secretary of Education pointed out that in his view, capacity building is more than just providing training or bringing in more human and physical resources. He explained:

> Capacity building does not only mean deploying more people to the PDEs. It's deploying the right kind of people to do the right kind of job where they can use the resources effectively. . . . I think in some provinces we have people there, but they're not the right kind of people. So when we talk about capacity building, we're talking about replacing the people who are not effective with people who are more effective. After that if there is a need to create more positions, then we'll create more. We'll put more money and more facilities into the provincial system to make them work. (AS-02)

In a similar vein another Provincial Assistant Secretary of Education highlighted that a lack of initiative to act was caused by a lack of knowledge and education. He explained:

> I think that comment regarding lack of capacity would be true. A lot of things don't get done because of lack of initiative, that is caused by limited knowledge that our workers possess. Obviously some of them have been promoted without receiving proper preparation to be in those positions. (AS-03)

To increase the abilities of the operators in the PDEs, education and training are seen as the vehicle by which capacity building can take place, as proposed by an Inspector with the Teaching Service Commission. He said:

> I feel that people who are holding key positions and making very important decisions need to be better educated at an advanced level, because where they are not very well equipped through education, they have problems. . . . I see education as vital in preparing people. (TS-04)

In calling for training for administrators, one Provincial Assistant Secretary of Education emphasized that training must be the right kind, that will help operators perform their functions. The right people must be selected for training in the first place. In his words:

> One area that needs a lot of improvement is training. When we talk about capacity building we should know what we want to put in place so that we train these people for those specific tasks. When people are not responding to the system, we either do one of two things: We redeploy them, or we retrain them. You find that a lot of people go for training, but when they come back, that training does not seem to help them operate in the system. So we should send people to the right kind of training. On selection, you select the right people for the right courses. You find the right training for the right kind of people so that when they come back they can be deployed straight into the kind of activity where they can be effective. (AS-02)

The participants also identified the possible issues and topics that could be included in the training programs. A senior official of the NDOE thought that because many Provincial Assistant Secretaries of Education are promoted from the position of school principal, they do not understand the importance of communicating educational data to the NDOE. He suggested that training that would lead to recognizing the importance of the flow of information would help improve the productivity of these officials. He elaborated:

> If we have to get these communication problems solved, I think inservice training is needed for Provincial Assistant Secretaries [of Education]. Sometimes these people are appointed to these positions through the ranks of headmasters [principal]. Consequently, they become too occupied with routine matters. They may not be aware of the importance of the data that we want quickly. But once you help them to know that, when we want this information, the provinces may respond very quickly. (ND-04)

The Superintendent for Secondary Inspections bemoaned the fact that although the Inspectors are able to carry out school visits and write reports, the Provincial Assistant Secretaries of Education do not seem to pay any particular attention to these reports. He claimed that this ignorance is probably a function of insufficient education. In his words:

> I don't think the Provincial Assistant Secretaries [of Education] see the need for them to read these reports and take note of what needs doing. I think they need to be educated on the importance of the reports. These reports contain a lot of information that they need to consume and take action on. (ND-14)

A Senior Professional Assistant in a PDE, on the other hand, suggested that training for PDE officers should be focused on improving management skills. He identified "project planning, project evaluation, and general administration as the kinds of administrative skills that needed to be taught to officials" (AS-05). He agreed that too often people have been appointed to these positions without any preparation. Thus, providing training in basic management and planning skills could assist these provincial officials in their work.

Structural change. One of the problems associated with resource and information flow, as mentioned earlier in this chapter, is the mental barrier that many PDE officials develop in relation to cooperating with the officials from the NDOE and the TSC. Furthermore, communication takes longer because of the many links in the channel. The First Assistant Secretary for Finance and Administration elaborated upon these problems:

> One of the criticisms that our administration heard was that lines of communication between the Provincial Assistant Secretaries of Education in the provinces and the National Department of Education were not clear cut because the [National] Secretary of Education had to go through the Secretary of the Provincial Department in order to get down to the Provincial Assistant Secretary of Education. This is a clear disadvantage because the Secretary does not have the powers of direct control to see that things are implemented straight away. (ND-07)

This official insisted that making the Provincial Assistant Secretaries of Education responsible to the National Secretary of Education would be a clear advantage:

> Now, with the proposed new system, it is envisaged that some of the positions in the provinces would become part of the National Department establishment so that their day-to-day operations would come directly under the National Secretary of Education. That way, there would be an advantage. If the National Secretary had direct control of some of the field officials, he could give them instructions straight away, and they would carry out whatever actions he requests of them. (ND-07)

The move to create a single-line department was advocated by members of all the organizations that participated in this study, as discussed in the earlier part of this chapter under the heading "Structural Changes to Improve Access and Delivery." Having a single-line department was seen as a solution to many of the existing problems. For example, one Provincial Assistant Secretary of Education claimed:

> A lot of provinces want to do things, but because of lack of manpower or resource personnel in the provinces are unable to do so. We feel that with this new set-up, we would get the resource-personnel support from National Department and be able to do something with work activities that should have taken place a long time ago. (AS-04)

An Inspector with the Teaching Service Commission was of the opinion that "the new reforms to the Provincial Government would help minimize the selection of unqualified Provincial Assistant Secretaries of Education" (TS-04). He added that under a single-line department the National Secretary of Education "would appoint people who are suitably qualified for those jobs" (TS-04).

Personnel visitation. Although subject to the availability of financial resources in most cases, personnel visitations were also seen as means by which information flow between and among the national bodies and the PDEs could be improved. Personnel from the NDOE and the TSC could visit the provinces and hold forums to communicate information on changes that were taking place. The Superintendent of the Staff Development Unit in the NDOE suggested that forums could be held during the Provincial Inservice Training Week (PIST) and/or the National Inservice Training Week (NIST) to inform teachers of what was going on in the country. These forums, he added, would give the teachers a chance to ask questions and get clarification on issues first hand. He explained:

> In terms of forums for teachers, we don't have a lot of them. But I think that is one way we could pass information to the teachers. I don't know who would be able to take the leading role, but from a training point of view, we think that a lot of the information for teachers could be transmitted through the NIST week they have in the provinces. (ND-08)

The Secondary Inspector for the Central Province agreed with the idea of personnel from the NDOE and the TSC visiting the provinces to keep teachers and PDE officials informed. From his vantage point, clarification of procedures was needed from the TSC. He explained:

> There should be more visitation from the TSC to brief the provinces on changes that are coming or to inservice the people of the various sections of the Teaching Service Act. At the moment I don't think we are doing that well enough. The provinces sometimes are reluctant to take such changes seriously. An example may be the proposal on restructuring of provincial high schools, where I think only two provinces made suggestions. I feel the TSC should really go down to the provinces and interact with them to publicize certain issues and at the same time get an idea of how the provinces see the operation. (ND-15)

Summary

This part described the information flow between and among the NDOE, the TSC, and the PDEs. The means used to exchange information included reports, circulars and instructions; conferences, personal visitation, and the Secondary Inspectors. By and large, there is a constant flow of information between the NDOE and the TSC. There is also a regular flow of information from both the NDOE and the TSC to the PDEs. Information flow from the PDEs to the two national bodies, however, is somewhat sporadic.

Several problems relating to information flows were identified: structural difficulties, lack of capacity in the PDEs, lack of finance, and poor dissemination of information at the provincial level. The participants provided five proposals for enhancing information flow. These were to modernize communication technology, to make structural changes that would improve cooperation, to improve the capacities of the PDEs, and to provide forums and personnel visitation.

Chapter Findings

This chapter describes the information and resource flows between and among the NDOE, the TSC, and the PDEs. Discussion is also centered on the problems and solutions suggested by the study participants. In this part the findings of the chapter, including improvements suggested by the participants, are summarized under two headings: Resource Flows and Information Flows.

Resource Flows

Resource flows were identified in terms of human and physical resources. By and large, human resources flow from the NDOE to the PDEs. Because the PDEs are perceived to lack the capacity to perform some of their functions independently, they depend on experts from the NDOE and the TSC to assist them. In particular the PDEs depend on experts from the NDOE to assist them in drawing up their education plans and education acts, as well as to provide expert technical advice on how to process the resumption of duty forms.

In terms of physical resources, there is very little resource sharing among these organizations. In the final analysis, all of these organizations depend on the National Government budget for funding. It is common that all of these organizations do not receive anywhere near sufficient funding for them to carry out their functions fully. The Secondary Inspectors who are based in the provinces receive some resource assistance from the PDEs. These needs are most acute at the beginning of the year when the Division of Inspections and Guidance awaits its allocations from the Department of Education and at the end of the year when the Inspectors have exhausted the funds that have been allocated.

The frequency of personnel visitations to the provinces is greatly affected by the availability of financing to the NDOE and the TSC. Although these organizations are aware of the need for more frequent presence of the national officials in the provinces to provide needed technical expertise, they can provide such expertise only when funds are available for them to do so. Consequently, there is limited flow of human resources from these two national bodies to the PDEs.

Problems inhibiting resource flow. Several problems were identified by participants as factors that hindered the smooth flow of resources among these organizations. Shortage of funds, as explained above, was seen as the main obstacle. Procedural difficulty in accessing funds, especially from the perspective of the NDOE officials who are stationed in the provinces, is another. The process of transferring cash from the NDOE to the Provincial Cash Offices proves cumbersome at times, and this prevents the Inspectors and Guidance Officers from accessing these funds. Another area where procedural difficulties had been experienced was the processing of teachers' fortnightly pays. The resumption of duty forms are completed at the schools. These forms are then forwarded to the PDE for the Provincial Assistant Secretary of Education's signature. Then they are sent to the TSC and the salary section for action. This process is long and involves numerous links. Documents often get lost and many teachers have complained about not receiving their pays on time.

Other problems identified include breakdown in law and order and lack of capacity. Law and order problems in some parts of the country have prevented qualified principals and teachers from applying for positions in the schools in those provinces. On occasion, Secondary Inspectors do not want to be posted to those provinces. The lack of capacity among the operators is a problem that seems prevalent in all of the organizations. The problem, however, appeared to be most acute in the provinces. Either there are not enough personnel in the PDEs to perform all the tasks that are required, or there are enough people, but many lack the skills and the knowledge necessary to carry out their tasks.

Suggestions for improving resource flow. The resource flow problems identified above are known by these organizations. This is evident in the number of suggestions for improvement made during the interviews. Of major interest to this study is the recommendation by many participants for structural changes to improve access and delivery as well as increasing the capacities of the PDEs to expedite resource flow. As stated earlier, roles and functions in the provision of education are divided among these organizations to encourage participation and consultation. However, analysis of the interaction seemed to reveal that this structure is at times an obstacle to the smooth flow of resources. The participants were of the view that if certain of these functions were redefined, the number of links could be decreased, which would improve the resource flow.

One major interest to the participants was the redefinition of whose role it is to determine educational policies. The common view at the time of the research was that if the NDOE assumed all the policy-making powers, leaving the provinces administrative powers only, resources would flow more easily. Because educational priorities would be the same in all provinces, equitable amounts of funds would be made available for education.

The problems relating to the process of paying the teachers' salaries on time were well articulated. The participants' recommendation was that if this function were delegated to the PDEs, all the issues could be dealt with at that level. In their view, this change would speed up the process. As mentioned earlier, this restructuring was approved and was being implemented at the time of data collection.

Capacity building is perceived as most important and necessary for the officials in the PDEs. Training for these officials should be focused on acquiring skills in planning, project design and evaluation, and report analysis. The officials at both the NDOE and the TSC were of the opinion that if planning and project design activities were done properly at the provincial level, human and physical resource flows would be greatly enhanced. For the latter, the participants suggested that if good education plans were in place, these could be used to seek foreign aid, thereby increasing the supply of available financial resources.

Information Flows

As stated earlier, the delimitation of roles and functions required that information flow systems be established to link the activities of all the member organizations. In the last 25 years the education system generated six major means of information flow that have helped to transmit information between and among these organizations: Circulars and Instructions, reports, conferences, personnel visitation, Secondary Inspectors, and circulation of minutes.

Circulars and Instructions from the national organizations to the PDEs are the most regular form of information transmission between and among these organizations. These sources are used to convey educational policies and operational procedures. Annual, quarterly, and monthly reports were identified as other important means of information exchange. These media communicate summaries of the activities performed by the various organizations. The reports have become useful in informing the operators about what each organization is doing. Some of the participants identified conferences, especially the Senior Education Officers' Conference, as very useful information sources. This conference is held annually and provides a forum for proposing and discussing new education policies and sharing implementation problems and information about what each province is doing in term of educational innovations. Nearly all the participants who mentioned this information source rated it very highly because they felt this conference provided the time and opportunity for potential problems to be identified and perhaps avoided before new policies were proposed to the National Government.

The Secondary Inspectors, because of the role they play, are the best informed officials about the operation of provincial high schools. They have become a valuable link between the two national bodies and the PDEs. The knowledge they possess about the schools is utilized by these organizations. Another medium of information exchange is personnel visitations by officials from these organizations. In the course of their "tour of duties," these officials are able to communicate face-to-face with personnel from the other organizations. In the process, they pick up and pass on information to other significant persons in their own and the other organizations. Finally, the exchange of minutes of the NEB and the PEBs has also been found to be useful in informing the administrators of the progress and the problems in education throughout the country. The PEB minutes were seen as most useful by the senior officials from the NDOE because these gave them an idea of what was going on in the provinces. Because information flow from the PDEs to the NDOE is at best limited, these minutes play a vital link in educational planning.

Problems associated with information flow. Three major obstacles to information flows were identified by the participants: structural difficulties, lack of capacity, and nondissemination of information at the provincial level. The structural difficulties occur because officials at the PDEs are answerable to their respective Provincial Governments, whereas the NDOE and the TSC report to the National Government. Because of these different structural alliances, oftentimes problems with information flows are experienced. When operational standards are not adhered to, there is very little that any of the organization can do to force compliance. Consequently, each of these organizations depend on "good will" to ensure information flow.

Lack of information flow among these organizations was also perceived as a function of lack of capacity. Although all the organizations lack full capacities to function as smoothly as they would like to, this problem was seen to be more acute with the PDEs. Three problematic areas were identified. First, the PDEs lack manpower. They do not have enough personnel to accomplish their functions. Second, there is constant turnover among the Provincial Assistant Secretaries of Education, resulting in the appointment of some Provincial Assistant Secretaries of Education who are perceived either to be incapable or to lack understanding of the provisions of the educational laws and consequently do not adhere to them. The third problem contributing to lack of information flow is the uncertainty experienced by the NDOE and the TSC on whether the Circulars and Instructions they send out to the PDEs are read and disseminated to others who should also receive them. There are claims by the NDOE and the TSC participants that these Circulars and Instructions are not read and understood by the educational authorities in the provinces; neither are these duplicated and passed on to teachers in the schools.

Solutions to improving information flow. Having recognized the information flow problems, the participants also made suggestions as to how information flow should be improved. Three of the suggestions are of interest, because they are most likely to be actioned in the near future. These are modernizing the information technology, improving the capacity of the PDEs, and changing the structure to make information flow more directly.

The education system continues to depend on conventional means of communication to transmit information. Many participants saw this as problematic because information did not always flow to where it was needed. Oftentimes the information arrived late at its intended destination. Computerization of the information system, according to many, would enable all organizations to access the information as and when they require it. Capacity building at the PDE level was also seen as a positive step towards improving the information flow. Upgrading the qualifications of the present operators would lead to greater level of confidence and increased competence. The emphasis on upgrading the capacities of PDEs should be focused on identifying suitable people and matching them with the right type of training. This match is seen as important because it would facilitate immediate utilization of the knowledge and skills learnt by the PDE staff at inservice training courses. Again, restructuring the roles and responsibilities was perceived as a way in which unnecessary links in the communication channel would be eliminated. The common perception was that if the position of the Provincial Assistant Secretary of Education were declared a designated position, the National Secretary of Education would appoint these officials, and at the same time they would be answerable to him. In this way, he would have the power to take action on Provincial Assistant Secretaries of Education if they did not perform well at their work. Communication would be much improved because the National Secretary of Education would be able to instruct the PDE officials to follow the standard operation procedures.

In this chapter the resource and information flow relationships have been identified and discussed. The discussion also focused on problems affecting the resource and information flows between and among the member organizations. From the analysis of the interview data, solutions suggested by the participants to improve the flow of resources and information between and among the member organizations were detailed. The statement of the findings shows that there is more human resource sharing than physical resource sharing. In general, the flow of resources or information among these organizations is subject to "good will" among the operators. In chapter 7 conflict and conflict resolution among the participating organizations are detailed.

CHAPTER 7

CONFLICT, CONFLICT RESOLUTION, AND OUTCOMES OF CONFLICT

Conflict is a normal outcome of humans interacting individually or as groups. Because organizations are abstract conceptions and it is the human beings in them that give the organizations their life and character, conflict is therefore inevitable in interorganizational linkages. The term *conflict* is an elusive one to define. Follett (1925; cited in Metcalf & Urwick, 1957) defined conflict as "the appearance of difference, difference of opinions, [and] of interest" (p. 17). Rahim (1986; cited in Hanson, 1991) defined conflict "as an 'interactive state' manifested in incompatibility, disagreement, or differences within or between social entities" (p. 273). Banner and Gagne (1996) defined the term conflict from a structural perspective. In their view, "conflict refers to disputes or disagreement between units of organizations, not simply between individual organization members" (p. 396). For the purpose of this study, Rahim's definition will be used.

In interorganizational relationships conflict can occur at individual and collective levels within and between interacting organizations (Hall, 1987). The purpose of this chapter is to identify conflict situations and their causes, how conflicts are resolved, and how they affect the interorganizational linkages between and among the National Department of Education (NDOE), the Teaching Service Commission (TSC), and the Provincial Divisions of Education (PDEs). This chapter addresses the fourth research question:

> **How do these organizations perceive conflict affecting their relationships with respect to the operation of provincial high schools?**

Information for this chapter is largely drawn from the interview transcripts. This is supplemented by data from the analysis of documents including statutes, reports, policy statements, government circulars, and the observation journal. This chapter has six parts. In part 1 conflict situations are discussed. This is followed by a discussion of the causes of conflict in part 2. In part 3 conflict resolution strategies are discussed. In part 4 is presented a discussion of the effect of conflict on interorganizational relationships. Part 5 deals with the effect of conflict on individual organizations. In part 6, the findings from the chapter are summarized.

Conflict Situations

One of the major findings in chapter 4 is that there are no major disagreements between the NDOE, the TSC, and the PDEs with regard to the division of roles and functions relating to the operation of provincial high schools. However, disagreements, and hence conflicts, have occurred in the way these organizations have gone about implementing their delegated responsibilities. The participants' description of conflict situations and the causes of conflict seem to reinforce these findings. This part of the chapter details the conflict situations between and among the participating organizations.

There is little conflict between the NDOE and the TSC. Whatever conflict there is between these two organizations is not considered to be major, as indicated by the response from the Assistant Secretary for Inspections and Guidance in the NDOE. In explaining the type of conflict that the NDOE has experienced with the TSC, he said, "We may not see eye to eye with how certain functions are implemented, but I don't think there is any major conflict between the TSC and us" (ND-03). One high ranking official of the TSC agreed. In his words, "We have not really experienced any major conflicts between the Commission and the Department of Education. Since 1987, we've maintained a very good and close working relationship with the National Secretary of Education and his senior staff" (TS-02).

Conflict situations, however, have occurred between the NDOE and the PDEs or the TSC and the PDEs. More specifically, conflict has occurred over policy directions and policy implementation between the NDOE and the PDEs. Similarly, conflicts arise over appointment of teachers and in situations relating to autonomy between the TSC and the PDEs. Each of these is elaborated upon in the following paragraphs.

Conflicts Relating to Policy Direction and Policy Implementation

Conflict has arisen between pairs of organizations with respect to provincial high school policies and their implementation. Because provincial high school education policy making is a concurrent function of both the NDOE and the PDEs, there have been occasions in which both organizations have not agreed on what might be acceptable provincial high school policies and how they should be implemented. One such policy that resulted in conflict is the "free education" policy. The free education policy is basically a National Government decision intended to provide funding for the purchase of materials for the schools. Although everybody accepts the fact that there is a need for materials to be put into schools, the implementation of that policy has provided some disagreements between the NDOE and the PDEs. A high ranking official of the NDOE explained the nature of the conflict. He said:

> Our Minister, for example, wanted material procurement and delivery to be centralized. In other words, the procurement and the distribution of materials to the provinces would be controlled by the NDOE. A lot of the provinces did not agree with that. The NDOE, because of the Minister's directive to us, more or less supported the Minister. The provinces argued that because they are on the ground, they should be the ones who know what is best for the provinces. And therefore, they should have that money and be responsible for purchasing the materials and distributing them. (ND-02)

Another educational policy that also resulted in conflict between the NDOE and the PDEs is educational reform to expand the secondary-education sector capacity to help meet the demand for postprimary education. In order to provide for more spaces for Grades 11 and 12 in selected provincial high schools, the following restructuring would be required. Elementary schools would be established to provide education from preparatory to Grade 2. Primary schools, on the other hand, would run from Grades 3 through 8. The transfer of Grades 7 and 8 from the provincial high schools to primary schools would create room for Grades 11 and 12 to be introduced without too much capital outlay in the existing provincial high schools. The conflict occurred when a number of provinces began concentrating only on transferring Grades 7 and 8 to primary schools and replacing them with the introduction of Grade 11 and 12, while ignoring the establishment of elementary schools to cater for Grades preparatory to 2. The Superintendent for Curriculum with the NDOE elaborated:

> A lot of provinces didn't quite see that they needed to implement the reform in full. They were so excited about having more spaces for Grades 7 and 8, they started transferring them to the primary schools without providing for elementary school students. This caused a lot of implications in relation to the availability of finance, teachers, and curriculum materials. . . . The politicians showed a great deal of interest in introducing Grades 7 and 8 in selected primary schools because politically it was what the people wanted, and they would win votes from that. But in terms of education reform, it didn't quite fit the plan. (ND-10)

Policy implementation difficulties relating to the laying of charges for misconduct and the dismissals of teachers have also been experienced between the TSC and the PDEs. One Provincial Assistant Secretary of Education explained that in 1993 his PEB recommended to the TSC that a teacher be discharged from the Teaching Service. He claimed that his office had completed and forwarded all the paperwork to the TSC. But when the teacher appealed to the TSC, the latter claimed that they had not received the paperwork from the PEB concerned. Because of a lack of records, the TSC instructed the PEB to reinstate the teacher. The PEB refused, claiming they had forwarded the relevant documentation to the TSC and expected it to endorse their recommendation.

Similar concerns related to the TSC not endorsing the dismissal recommendations were also made by the NDOE. According to the Assistant Secretary for Policy, Planning, and Evaluation, "If there is going to be any conflict, it's in the area of teacher discipline. . . . [To illustrate], where the PEBs thinks that somebody should be terminated, the TSC does not terminate them; they give them other forms of punishment instead" (ND-01). The inability of the TSC to endorse PEB decisions is perceived by the NDOE as a weakness on the part of the TSC to enforce its own rules and regulations. In the words of the Assistant Secretary for Inspections and Guidance, "We might feel that they are not strong enough in implementing their own policies. At times, they're a little slow in implementing their own policies" (ND-03).

The Assistant Secretary for Policy, Planning, and Evaluation, who was once a Secondary Inspector, agreed with his colleague, saying:

> We believe the TSC should be sticking to its own rules which say that if a teacher commits this particular crime, he should be terminated. . . . Some of those rules are stated in their own Teaching Service Act. So the conflict is over the inconsistency in application of those rules. (ND-01)

Furthermore, the Secondary Inspectors themselves do not see the "charging role" as in keeping with their main function as advisors. This is noted in the Inspections Review Committee Report. "The Inspector's role as the charging official is in conflict with his main function of being an advisor, supervisor, counselor, and helper" (Department of Education, 1995, p. 12). It is possible that the way the Inspectors perceive the incompatibility of the "charging role" with that of their advisory function would have some influence on how effectively the role is carried out by them.

Conflicts Arising from Teacher Appointment Processes

One of the major areas of conflict between the TSC and the PDEs has been the appointment of teachers with tenure. This is an annual exercise and involves the advertisement of the vacant positions nationally by the TSC and the appointing of teachers to these vacancies by the PEBs. As outlined in chapter 4, the PEBs are the appointing authorities for provincial high schools. After the PEBs have made their decisions, the responsible PDE forwards these to the TSC, whose role is to carry out the task of central sorting of the different PEB decisions. The purposes of central sorting are to make sure that no single teacher is appointed to more than one vacancy and that correct processes and procedures, as determined by the TSC, have been carried out by the PEBs in reaching their decisions. But the PEBs bemoaned the fact that although they base their decisions on the advice given by the Secondary Inspectors, when the appointment results are returned, often there are a lot of changes to their decisions. One Provincial Assistant Secretary of Education explained:

> Let me explain it a bit. I know we have the central sorting system. Our provincial appointment committee makes the decision that a certain teacher is to be appointed to a position. When the results come back to us, we note changes made where another person is appointed to that position. . . . I don't know what criteria the TSC followed in disregarding our decisions. (AS-01)

An Appointment Officer echoed the same sentiments in regard to not knowing the criteria the TSC uses in making changes to the appointment decisions of the PEBs. He added:

> We expect the TSC to endorse our decisions because we are on the ground; we know the teachers, their experience, their ability, the roles and functions that they will perform. We make appointments according to the experience and the quality of the person as indicated in the information source we have. (EP-02)

The TSC explained the conflict relating to teacher appointments as being a result of failure by the PEBs to adhere to the processes and procedures set out according to the requirements of the Teaching Service Act. According to one Inspector with the TSC, "We get phone calls, we get letters from teachers and from individuals on boards of governors . . . claiming that appointments have not been made according to the law" (TS-04). He went on say that when these complaints are checked, they find that in many cases they are justified. Consequently, the TSC has to make changes to the PEB's decisions. Another aspect of this conflict is that when the TSC findings favor the teacher who is appealing, many PEBs are reluctant to implement the decision of the TSC immediately. This problem is elaborated further in the next section.

Whereas the conflicts pertaining to teacher appointments between the TSC and the PDEs are mainly over the non adherence by the PDEs to the procedures set out by the TSC, conflicts between the NDOE and the PDEs relating to the appointment of principals are more to do with suitability of the appointees. Conflicts with regard to the appointment of principals occur because quite often the recommendations made by the Secondary Inspectors are disregarded by the Provincial Assistant Secretaries of Education. Consequently, the Secondary Inspectors claim that less qualified principals are often appointed by the PEBs.

Conflict Relating to Political and/or Intergovernmental Autonomy

Under the provisions of the Organic Law on Provincial Governments of 1977, provincial departments were created to administer the affairs of the province. Consequently, the PDEs and the PEBs are part of Provincial Department structures, but their roles and functions are largely outlined in the Education Act of 1983 and the Teaching Service Act (1987), respectively. Because of the concurrent responsibility in relation to the operation of provincial high schools, there are often conflicts in the reporting process. One Provincial Assistant Secretary of Education explained that often his Provincial Minister of Education wanted all provincial high school matters to be reported to him only. Consequently, this Provincial Assistant Secretary of Education experienced a certain degree of conflict when submitting reports to the NDOE as well as the TSC (AS-04). This is not an isolated case. Other Provincial Assistant Secretaries of Education also shared similar experiences.

One high ranking official acknowledged that there is often conflict relating to intergovernmental autonomy. He noted, "While we decide the national policies here, there is nothing under the provisions of the Education Act of 1983 to help us say to the provinces, 'Look this is a national policy; you must implement it'" (ND-02). Provincial Governments, under the provisions of the Organic Law on Provincial Governments, also have the responsibility for making their own education laws that in some cases conflict with national policies. This fact proved to be one of the biggest problems in relation to the education function. The NDOE has to rely on a great deal of "good will" for policies to be implemented at the provincial level. This official continued: "I think it is the feeling by the provincial authorities that 'You are National Government, we are Provincial Governments; we don't want to see any more National Government involvement in our provinces'" (ND-02).

Concerns for autonomy have also led to conflicting situations in the granting of teachers' entitlements between the TSC and the PDEs. One such entitlement is the fellow leave. This is a long-service leave of six months, with pay, granted to teachers after continuous service of not less than 15 years. The decision to grant fellow leave is made by the TSC on recommendation of the PEBs, but the payments for these entitlements are the responsibility of the latter. Sometimes the teachers complain that although they have taught in the Teaching Service for the required period, their applications for fellow leave are often rejected by the PEBs. The Teaching Service Commission Chairman described the typical kind of conflict that occurs in relation to teachers taking fellow leave. In his words:

> A teacher applied to the PEB for fellow leave but was refused. When he wrote to us, we directed that he be given fellow leave. Now, one particular province was

> very upset about this one. The Provincial Assistant Secretary [of Education] said, "I am not subject to the Commission; I'm answerable to the Provincial Secretary." That is true, but because it is a function relating to teachers, we came to be involved. The Provincial Secretary of that province took sides with the Provincial Assistant Secretary of Education and said, "Yes, the Commission is wrong. We budget for the teachers' salaries, and the Commission cannot really tell us what to do." (TS-03)

The Teaching Service Commissioner for Legal Matters agreed that PEBs are duty bound to promote and implement the policies of the Provincial Government under the provisions of the Organic Law on Provincial Governments of 1977. He also warned that "they must also adhere to the provisions in the Teaching Service Act which are also contained in the Organic Law on the Provincial Governments" (TS-01)

Summary

In this discussion three categories of conflict situations in interorganizational linkages between and among the NDOE, the TSC, and the PDEs were identified. First, conflicts have been experienced in the determination of the provincial high school education policies and their implementation. Conflicts relating to the implementation of new provincial high school education policies occur when the PDEs and the NDOE place different importance and emphasis on what aspect of the policy is to be implemented and at what pace. The second category of conflict situations relates to the appointment of teachers and teacher discipline. The nature of conflict is that PDEs feel the TSC makes changes to their PEBs' decisions without acceptable reasons. The TSC, on the other hand, blames the PEBs for not adhering to the procedures set out by it for making appointment decisions. The third category of conflict situations was identified as those that relate to issues of administrative and political autonomy. Some provinces have expressed opposition to the National Government dictating polices to them. All of these conflict situations affect the operation of the provincial high schools, as elaborated later in this chapter.

Causes of Conflict

In the above part of the chapter the conflict situations were identified and briefly discussed. In this part the major causes of conflict between the NDOE, the TSC, and the PDEs are discussed. From the examination of interview and document data, two causes of conflict were identified: nonadherence to procedures and nonadherence to protocol. Each of these factors is discussed below.

Nonadherence to Provisions in the Acts

By and large, most of the participants were of the view that conflicts arise only when the various authorities do not function according to the provisions of the Education Act or the Teaching Service Act. Often there are arguments over how a certain function should be carried out and by whom. According to one senior official of the NDOE, "Conflict is sometimes caused by someone wanting to get something done quickly without delay" (ND-04). Sometimes this problem occurs because the authority that is responsible for the particular function is too slow to act. Consequently, those that are affected take matters into their own hands in order to expedite decision making. When this occurs the rightful decision makers complained about other parties interfering with their functions.

Conflict in regard to matters affecting teachers is frequently experienced. The TSC perceives this to be a function of a lack of understanding and appreciation of the education laws. In particular, the TSC officials complained that the PDEs did not seem to appreciate the fact that the TSC is the final authority in all matters relating to the employment terms and conditions of teachers. To elaborate upon this point, the Teaching Service Commission Chairman provided an example of one PEB's handling of certain disciplinary cases. He said:

> The PEB concerned wrongly suspended three teachers. They suspended them, . . . but they did not do it in the right way. In one case they suspended a teacher, but before implementing that decision, they decided to lift the suspension and allow him to go back. Later, they decided to demote him and transfer him. And again without implementing that decision, they decided to change it to termination. (TS-03)

According to the officials of the TSC, these types of mishandling of the affairs of teachers occur frequently. Subsequently, many teachers appeal to the TSC for justice. But when the TSC upholds teachers' appeals and instructs the PEBs to reinstate the teachers, many become reluctant to carry out this lawful order. The Teaching Service Commission Chairman claimed that the poor cooperation is caused by a lack of appreciation and understanding of the roles and functions of the TSC in relation to ensuring that the interests of the teachers are protected. He explained:

> When we make decisions to reinstate teachers after finding that the PEBs are denying the teachers their rights and thus denying them justice, the PEBs turn around and say, "The Commission is wrong. We will not obey it." The problem here will be lack of understanding or lack of appreciation of the fact that the Commission is an authority that has powers over these matters. (TS-03)

It has been stated elsewhere that sometimes conflict is caused by the differences in emphasis that are accorded to the rights of the teacher as against the rights of students to receive a good education. In relation to appointment of teachers, the officials in the PDEs felt strongly that conflicts arose because the TSC placed too much emphasis on protecting the rights of teachers. They argued that the inspection system is thorough and is able to identify the strengths and the weaknesses of the teachers. Based on the Secondary Inspectors' reports, the PEBs reject or appoint teachers. But as one former Provincial Assistant Secretary of Education claimed, "The Teaching Service Commission is very, very strict on protecting the rights of the teachers who are their employees" (EP-04). He added that the TSC's overemphasis of the "legal aspect of the appointments process has sometimes become a hindrance to professional objectives in schools." When the interest of the teacher are not compatible with those of the students, there is often conflict between the PEBs and the TSC. The official went on to suggest that this could be solved if the Teaching Service Act allowed for room to easily connect the needs of the schools with those of the teachers.

Nonadherence to Protocol

Another cause of conflict is the negligence of protocol procedures by officials, especially from the NDOE, in their dealings with the PDEs. Several senior officials from the NDOE were of the opinion that nonadherence to protocol created a boundary, whereby the person on the receiving end often reacted by saying, "You have not given me information about your trip. For these reasons I'm not going to assist you or co-operate with you" (ND-16). Not informing the provinces before an NDOE official arrives in that province can partly be explained by the PNG's culture, which does not require the visitor to inform the host of his/her arrival as the First Assistant Secretary for Standards noted:

> Papua New Guineans being Papua New Guineans, there are people going to the provinces without informing the PDE personnel beforehand. And I think it's a lesson to us, in terms of maintaining good relations with the PDEs, in that we need to carefully assess who is sent to the provinces to carry out certain tasks. (ND-16)

The PDEs described this lack of adherence to protocol in terms of lack of communication from both the TSC and the NDOE. They claimed that sometimes both the TSC and the NDOE are unable to consult the PDEs before decisions are taken. With respect to relationships with the TSC, one Provincial Assistant Secretary of Education complained that the Teaching Service Commission officials often listen to and believe what a teacher tells them without finding out the reasons that this teacher had been put off the payroll or refused other privileges by the PDE. He claimed that the TSC more often than not makes its decisions based on what the teacher has said. This Provincial Assistant

Secretary of Education maintained that these are the kinds of situations in which the TSC needs to liaise with the PDE. He continued:

> We have our own reasons why we try to penalize teachers. These need to be considered very carefully by the TSC. Most of the time the TSC overrides our decisions. And we are at a loss to explain why. One result is that teachers seem to lose confidence in us. I think clear communication links needs to be established between the TSC and the PEBs who are the implementors of the TSC policies. This will enable us to effectively administer the TSC Act in the provinces. (AS-04)

The PDEs also complained about not being consulted by the TSC before its officials enter the schools. The officials at the PDEs felt that the TSC personnel visiting teachers in the school without consulting first the PDEs undermined what they were doing.

Summary

Interorganizational conflicts identified in this section are caused by human factors. One was the nonadherence to both the Education and the Teaching Service Acts. When this occurs, boundaries of responsibility are crossed, which upsets those who are legally responsible. The second factor involves nonadherence to the protocol of courtesy to inform the people into whose territory one is entering. In this case officials from the NDOE and the TSC had entered the provinces to carry out certain activities without first informing the Provincial Assistant Secretary of Education. As a result, the officials from the PDEs refused to cooperate in the planned activities.

Conflict Resolution

Conflicts over the way the delegated functions are carried out by those who are responsible occur frequently among these organizations, as highlighted earlier in this chapter. The participants identified three conflict-resolution strategies that have been applied to resolve these conflicts. These are mutual discussion, reference to higher authority, and written communication. The application of each of these conflict resolution techniques is described below.

Mutual Discussion

By and large, mutual discussion strategy is the most common conflict-resolution method between pairs of organizations. For example, when conflicts occur between one PDE and the NDOE, both sides arrange for time to discuss the issues either through telephone or face-to-face interaction. Oftentimes the need to resolve a conflict quickly may require dispatching of an NDOE official to the province concerned. Sometimes conflict occurs between the NDOE and several provinces. In these cases, the Senior Education Officers' Conference is the medium through which conflicts are resolved through dialogue. According to one high ranking official of the NDOE:

> Any issues that have not been resolved through the year are tabled at . . . [the Senior Education Officers' Conference] to be resolved there. Each province is encouraged to bring up . . . any problems it is faced with. If it's a common problem across the board, we discuss and resolve it then. (ND-02)

If there are problems peculiar to an individual province raised at the Senior Education Officers' Conference, the Provincial Assistant Secretary of Education concerned can discuss these with the NDOE officials when they are in Port Moresby. This senior official continued:

> The Provincial Assistant Secretaries of Education also have a lot of meetings in Port Moresby. These meetings discuss financial and budgetary issues. They have this opportunity to come and discuss their individual concerns with us. In that way we try to resolve some of the problems. (ND-02)

Solutions are usually found through mutual interaction and discussion. But sometimes there are no immediate solutions. The Superintendent for Curriculum claimed that "just being prepared to listen to people" (ND-10) helped the conflicting parties to accept the status quo, even if it is for the time being. He went on to explain that by being prepared to listen to the complaints of the other organizations, "you don't have to compromise. An understanding comes out of listening. The other conflicting party soon sees your position and agrees" (ND-10). Mutual discussion of conflicts to find solutions was described by a senior official of the NDOE as "like family interactions." When the parties feel that the problem has not been solved, they will continue to work on it until a solution is found. In his words:

> Honestly, I think we have a very good family. We don't carry on. We don't carry on with a problem. We keep working at the problem until we come to some very common understanding, and we forget the problem. We just get on with our work then. (ND-04)

Higher-Authority Solution

A second method of conflict resolution employed by the participating organizations is referral to higher authority. Some conflicts are referred to the heads of the interacting organizations to solve. The heads meet and discuss the issues that are affecting their interorganizational relationships. Sometimes the heads meet through teleconferencing to resolve conflicts. According to the Assistant Secretary for Inspections and Guidance, the conflicts that are referred to higher authorities are those that involve personalities. He explained:

> I am talking about disagreements at the provincial level that would often be personality clashes between the senior official in the PDE and perhaps the Secondary Inspector. These would often have a professional basis. . . . When conflict becomes particularly difficult, it is usually because personalities are involved. When this occurs the provinces where this has happened would tend to refer it to the Provincial Secretary. And in the case of the Secondary Inspector being involved, they would refer it to us, and it would eventually become the National Secretary's problem. It doesn't happen often, but in extreme examples, we would get the Provincial Secretary and the National Secretary of NDOE to discuss these issues. (ND-03)

If the claim by the above official is true, this method of conflict resolution is used only in extreme cases, that is not very often.

Written Communication

A third method of conflict resolution identified is the use of written communication to confront and solve conflicts. This method is used mostly in resolving conflicts between the TSC and the PEBs. The TSC, in particular, finds this technique useful in dealing with conflicts arising from the breaches of the Teaching Service Act. When the TSC feels that face-to-face interaction or telephone interaction with PDEs has not worked, and the Teaching Service Act has to be complied with, it uses written communication to point out where the PEBs have erred and makes reference to the relevant sections of the Teaching Service Act of 1988 under which the TSC seeks compliance. At other times written communication is used "to give direction to the PEBs. That direction is final and must be implemented" (TS-03). When the TSC feels its decisions are justified under the provisions of the Teaching Service Act, it will issue a direction for the erring PEBs to comply.

According to the TSC participants, written communication is often used to correct teacher appointment decisions of the PEBs that are seen to be contrary to the provisions of the Teaching Service Act. They are also used to point out the correct procedures for creating new positions. An Inspector with the TSC elaborated:

> A lot of cases of teacher appointments and creation of new teaching positions do not follow the correct procedures. If the positions are created without the TSC's approval, we write and tell them, "That is not on." If a teacher is not appointed according to the legal procedures, then we write and we give directions. (TS-04)

It should be noted that although the roles and functions of these organizations are governed by laws, courts have not been used to solve any conflict between and among these organizations. A partial explanation for all problem solving being carried out within the public service structure is that, despite moves by several Provincial Assistant Secretaries of Education to assume responsibility for functions such as Inspections, all organizations, in general, respect the division of responsibility. The conflicts, as stated above, have been experienced in the way these functions are carried out.

Summary

Three conflict resolution techniques were identified from the discussion above. Each of these approaches allows the participating organizations to confront conflict situations and bring them to resolution. By far the most common means of resolving differences among the participating organizations is through mutual discussion. When conflicts occur, the parties involved discuss their difference through face-to-face interaction. Sometimes when no solution is possible at the level of the hierarchy where the conflict occurs, the matter is often referred to higher authorities to deal with. In this case the organization heads are asked to resolve the issues. The third method involves written communication. This method is usually part of the other two. It is, however, used more often in resolving prolonged conflicts.

Effect of Conflict on Interorganizational Relationships

In this part an attempt is made to identify and discuss the outcomes of the interorganizational conflicts as suggested by the participants in response to an interview question. The outcomes of interorganizational conflicts are discussed under three sections. In the first section the participants' perceptions of conflict are discussed. It is followed by a discussion of positive outcomes of conflicts in second section. In the third section, negative outcomes of conflict are detailed.

Perception of Conflict

In order to understand the rationale behind the choice of conflict resolution techniques in resolving interorganizational conflicts between and among the organizations in this study, it is useful to state how conflict is perceived by the participants. By and large, conflict is viewed from a nonpersonal perspective. It is viewed as part of the system's operation and is therefore accepted, and the organizations continue to work together. The different ways conflict is perceived by the participants are detailed separately.

Maintaining good interorganizational relationships. From the perspective of the NDOE, all officials who interact with the PDEs on a regular basis are always duty bound to work with the PDE officials, whether they like it or not. Whatever conflicts arise between the NDOE field officials and the Provincial Assistant Secretaries of Education, these field officials are expected to maintain good relationships with the Provincial Assistant Secretaries of Education and other officials within the PDEs. In the words of the Superintendent for Secondary Inspections:

> They must work with him. They must smile at him and joke with him . . . . Conflicts can happen, but we've always made it our business that those conflicts do not force us to create division between us and the people that we have been sent by the Secretary to work with. (ND-14)

Conflict as part of the professional relationship. The earlier discussion of the conflict situations in this chapter revealed that in many cases the conflicts are constantly caused by misunderstanding. In the case of relationships between the TSC and the PDEs, the latter's submission of decisions with regard to such issues as appointment of teachers, discipline of teachers, and creation of new teaching positions is not very clearly written. Often these submissions do not come through proper channels. That is, all teacher appointment and discipline decisions as well as requests for new teaching positions should be made by the PEB and submitted. Instead, the TSC participants seem to feel that the Provincial Assistant Secretaries of Education often unilaterally make decisions that the PEBs should make. Similarly, there are often heated arguments between the NDOE and the PDEs over provincial high school policies, but these are not allowed to affect professional relationships among the operators. According to the Teaching Service Commissioner for Legal Matters:

> We have had heated arguments, but they have usually resulted in better relationships. . . . We take it that anything that happens in the system belongs to the system. If there is something wrong with the system, we'll fix it. That kind of attitude has certainly helped in bringing about amicable settlements of conflicts. (TS-01)

An Inspector with the TSC echoed what his superior thought. He pointed out that it is inevitable that human beings will make mistakes. Consequently, conflicts occur. In his words:

> I think conflicts and difficulties arise, but it is part and parcel of everyday work with the other two organizations. So our attitude is a 'take it easy' kind of approach. This allows the PDEs and the NDOE to be more relaxed with us and discuss issues with us. (TS-04)

The general perception is that any conflicts that arise out of the interactions of the operators among these organizations are taken as professional conflicts. One reason for this attitude is the leadership that is provided by the TSC and the NDOE. For example, one Inspector with the TSC claimed, "The Commission is made up of people who seem to be understanding of what is happening. They are able to accept conflict and look at it from a professional perspective and not from a personal point of view" (TS-04). Seeing conflict as a function of the system helps create a desire among the different organizations to seek solutions rather than to let these conflicts affect their relationships.

Positive Outcomes of Conflict

Many interorganizational conflicts between and among the NDOE, the TSC, and the PDEs have led to positive outcomes. These outcomes have been identified in terms of improved relationships and reevaluation of organizational practices to improve procedures. Each is elaborated further below.

Improves relationships. As pointed out earlier in this chapter, conflict was perceived by the participants as a function of the roles that various organizations have been delegated to play in the operation of provincial high schools. Thus, the participants claimed that the conflicting parties always seek out possible solutions. Conflicts are identified and resolved as quickly as possible. These positive perceptions of conflicts and the resultant conflict-resolution processes positively affect interorganizational relationships. According to a senior official of the NDOE:

> I must say conflict does not have that much adverse affect on our relationship with the other organizations. In fact, it improves our relationships and our common understandings with them. Our relationships with the provinces have not deteriorated because of conflict. Where there are conflicts we try to resolve them as soon as possible or as much as possible. But conflict has not strained our relationship to the point that we cut ourselves off and won't have anything to do with each other. It does the opposite. It tends to bring us closer. (ND-02)

As misunderstandings and perceptions are clarified, the operators from one organization are able to see and understand the actions of operators of another organization that have led to conflict. This greater appreciation of the issues promotes harmony among the operators.

Reevaluation of the procedures. Many conflicts are caused by the way certain functions are carried out by those who are responsible. In reference to the effects of conflict on the procedures and processes applied in the implementation of educational policies, one senior official from the NDOE stated that conflict contributes to the improvement of those processes. In his words, "When a conflict arises, it gets people on their toes. They say, 'This is what they are saying about me.' Then they start looking at themselves and the way they carry out their duties" (ND-04). One divisional head in the NDOE agreed, saying, "I think, to a certain extent, it helps us to understand certain issues and develop policies that can be properly implemented and controlled" (ND-05). Another divisional head in the NDOE saw conflict as having both positive and negative effects. In relation to identifying the positive outcomes of conflicts, he stated:

> In some ways interorganizational conflicts arise in terms of role conflicts -- someone overstepping someone else's duty. I always view them as having positive effects. That is, if the conflict is there, we identify it and try to find a way out of it. It may mean that something in the duty statement has not been clearly written, which causes the conflict, so we need to review the duty statement or if something in the instruction by the Minister or the [National] Secretary is causing the conflict, then the positive thing is to review that instruction to make sure that it is clear and the areas of responsibilities are also clearly set out. (ND-07)

Negative Outcomes of Conflict

Some interorganizational conflicts have led to negative outcomes. According to the First Assistant Secretary for Finance and Administration in the NDOE, conflict becomes negative when different organizations are unwilling to compromise. In his words, "They stick to their guns, so to speak, and do not want to change" (ND-07). In his opinion, conflict then becomes noticeable in the whole system. Everyone becomes aware that the NDOE is not working well with either the TSC or the PDEs because of some misunderstanding. Negative effects of conflict on the interorganizational linkages have been identified as delaying the implementation of policies, souring relationships, and creating anxiety among the teachers, as elaborated upon below.

Delays in implementation of policies. In chapter 4 it was pointed out that delegation of roles and functions under the provisions of both the Education and Teaching Service Acts meant that dependency is expected in the implementation of policies. The TSC depends on both the NDOE and the PDEs to implement its policies and decisions. The NDOE, on the other hand, depends on the teachers and the PDEs to implement the national education policies. The PDEs, for their part, depend on the TSC to endorse their teacher appointment decisions and on the NDOE to provide leadership in the construction and the implementation of the school curriculum. The Assistant Secretary for Policy, Planning, and Evaluation in the NDOE gave a recent example of conflict delaying the implementation of policy. He said:

> One dispute we had with the PDEs is the selection of the institution to become a secondary school. We selected one school, and at the provincial level they selected a different one, so that is affecting our planning in terms of agreeing on which of those two schools to go for. This has often delayed the implementation of the secondary school program. (ND-01)

This official also pointed out that disagreements over finding suitable housing for Secondary Inspectors sometimes results in no Secondary Inspector being posted to that particular province. Not placing a Secondary Inspector in certain provinces, in turn, causes frustration among the principals and the teachers because these people are denied the services of the Secondary Inspectors.

Sour relationships. Although the participants claimed that conflict was perceived and reacted to from a professional point of view and therefore did not affect personal relationships, a more careful examination of the data indicates that sometimes conflict leads to sour interpersonal and interorganizational relationships. However, according to the Assistant Secretary for Policy, Planning, and Evaluation in the NDOE, these sour interorganizational relationships "usually do not last for a long time" (ND-01). He stated that when the situations causing the conflicts are explained, relationships usually get back to normal.

Anxiety among teachers. Another aspect of the negative outcome of interorganizational conflict is that it creates unnecessary anxiety among teachers. Disputes often occur between the TSC and the PDEs with respect to the appointment of teachers. These disputes cause anxiety among teachers as they await the outcome of conflict resolution. For example, as appointing authorities, the PEBs appoint teachers to vacant positions on an acting basis. As often is the case, the teachers take up the positions at the direction of the PEBs while the paperwork is forwarded to the TSC for endorsement. Often the TSC does not endorse the PEB's recommendations; consequently, the teacher's pays are delayed. A senior official in the NDOE explained the situation:

> An appointment to a vacant position has to be made quickly by the PEB. While the legalities of the appointment are being sorted out, the teacher takes up the position and begins teaching. That creates a particular problem. Someone is teaching in a school while the TSC and the PEB are discussing the problem. The teacher does not know whether he will remain there or not, so it creates anxiety on the part of the teacher who is affected. (ND-04)

Undoubtedly, this state of affairs does lead to anxiety. Therefore, it is difficult for a teacher in such a situation to make a commitment to the school. Also, it is difficult for principals to finalize certain planning activities with regard to the implementation of the curriculum.

Summary

By and large, conflict is perceived as a consequence of professional interplay between and among the organizations in the network. From the NDOE's perspective, efforts are always made to maintain cordial working relationships with the PDEs. Thus, attention is paid to finding solutions to the conflicts experienced. Interorganizational conflict has resulted in both positive and negative outcomes. Positive outcomes were reported in terms of improving relations among the organizations and in terms of the reevaluation of the policies and procedures of the individual organizations. Negative outcomes of interorganizational conflicts, on the other hand, lead to delays in implementing policies, sour relationships, and cause anxiety among the teachers.

Chapter Findings

This chapter addresses the fourth research question, that sought to determine how the participants perceived interorganizational conflict affecting the interorganizational linkages between and among the NDOE, the TSC, and the PDEs. In this part of the chapter the findings of the chapter are summarised under the headings.

Conflict Situations

Interorganizational conflicts occur over the way the member organizations accomplish their roles and functions. Little or no conflict relating to the delegated roles and functions was reported. Conflict situations occur in determining secondary education policies and their implementation, in the teacher appointment processes, and in challenges to political or administrative autonomy. Interorganizational conflicts have occurred over the way national policies are implemented by the provinces. Often there have been differences between the NDOE and the PDEs over what aspects of a certain policy should take priority and at what speed that policy should be implemented. Conflict relating to teacher appointments occur between the TSC and the PDEs. The PDEs perceived the TSC as interfering in their decisions by making changes to their appointment decisions with no apparent reasons. The TSC, on the hand, argued that the PEBs do not adhere to the laid-down procedures, thus necessitating its intervention.

Conflicts relating to political and administrative autonomy occur when one organization feels that it is being dictated to by another organization. This reaction is quite common among the PDEs. These kinds of conflict, however, are inevitable because of the delimited roles and functions of each organization under the provisions of both the Education and the Teaching Service Acts. In general, though, these conflicts are not seen as major because they do not have an adverse effect on the operation of provincial high schools.

Causes of Interorganizational Conflicts

Two causes of interorganizational conflicts were identified in the discussion. First, and by far the more prominent factor that causes conflict, is the failure by the participating organizations to adhere to the roles and functions delegated to them under the provisions of both the Education and the Teaching Service Acts. Although there is little or no conflict over the delegated functions, there are instances where one organization has blamed another for overstepping the boundary of responsibility. Sometimes the operators go beyond their powers because they want to accomplish a given task quickly and the complementing organization is seen to be slowing down the process. At other times overstepping the responsibility boundary is seen to be caused by a sheer lack of understanding and appreciation of the provisions of the legislation.

One of the major areas in which provisions of the law have not been adhered to is in the appointment of teachers to vacant positions. The PEBs, which are the appointing authorities, complain that the TSC places too much emphasis on the legality of the appointments. That is, they are seen to be overconcerned with the "due process," as laid down by them, being adhered to by the PEBs. The PEBs perceive this to be detrimental to the interests of the schools and the students.

A second cause of interorganizational conflict identified by the participants is related to not following protocol, especially by certain officials in both the NDOE and the TSC. Many officials from these organizations fail to inform the Provincial Assistant Secretaries of Education of their schedules for visit to the provinces. The PDEs perceive this lack of effort to contact them by many national officials as undermining the integrity of their offices. Consequently, the PDEs react by not cooperating with their national counterparts.

Interorganizational Conflict Resolution

Interorganizational conflicts have occurred between and among the member organizations as discussed in this chapter. Three conflict resolution modes are evidenced in the discussion: mutual discussion, reference to higher authority, and written communication. In each of these approaches the operators in these organizations confront conflicts with a view to finding solutions. Mutual discussion of problems is identified as the most common mode of conflict resolution. This takes place in one-on-one, face-to-face interaction or in group meetings such at the Senior Education Officers' Conference and

Assistant Secretaries' meetings. In either case, the issues are discussed until solutions are forthcoming. Sometimes conflicts that cannot be solved by subordinates are referred to the heads of the organizations to resolve. At other times conflicts cannot be resolved quickly. In these kinds of conflict the member organizations use written communication to continue the dialogue in order to resolve the issues.

Effects of Conflict on Interorganizational Linkages

It seems that conflict is perceived by these organizations as integral to the professional interaction of the operators and is therefore accepted. Thus, as mentioned earlier in the chapter, efforts are always made to resolve conflicts. Because the participants perceive conflict from a professional perspective, interpersonal relationships have not been negatively affected to any significant degree. One influencing factor is that, as the overall coordinator of developments of provincial high schools, the NDOE has insisted that its officials continue to work with those from the PDEs regardless of what the circumstances might be. This attitude seems to have enabled the operators to make a distinction between personal and professional conflicts. In doing so, they promote cordial working relationships.

Positive and negative outcomes of conflicts are also reported. Many participants agreed that conflicts and their resolution lead to improved interorganizational relationships. Through mutual discussion, conflicting issues are clarified and misunderstandings cleared up. These in turn promote or strengthen interpersonal relationships. Conflict resolution also leads to member organizations reevaluating their procedures, policies, and attitudes. Conflict resolution usually prompts the conflicting parties to reassess their practices to increase clarity. Ambiguity within the policies and instructions is reduced as a result of these reevaluations.

Interorganizational conflict also results in negative outcomes. One major negative outcome is that conflict results in policies, instructions, and decisions not being implemented immediately. The interdependency that is unavoidably present in these interorganizational linkages means that when one of the participating bodies disputes a certain decision or policy, implementation is delayed while the conflicting parties find solutions to the problems. Conflict also sours interpersonal relationships among the operators in these organizations, although this does not last for a long time. Often it causes unnecessary anxiety among teachers. When disputes relating to the appointment of teachers arise between the TSC and the PEBs, teachers were reported to be anxious about their future during the time the two organizations are resolving the disputes. This inevitably affects the work of the schools and the achievements of their students.

This chapter described how the operators in the member organizations perceive conflict affecting the interorganizational relationships between and among the NDOE, the TSC, and the PDEs. The chapter discussed conflict situations and the causes of these conflicts. It then identified and discussed the conflict-resolution techniques employed by the member organizations. This was followed by a detailing of the effect of conflicts on interorganizational relationships. In the last part the findings from the chapter were reviewed. In the next chapter the effectiveness of interorganizational linkages is discussed.

CHAPTER 8

EFFECTIVENESS OF THE RELATIONSHIPS

Since the inception of the Education Act in 1970 and the passing of the Education Act of 1993, many roles and functions with respect to the operation of provincial high schools have been mandated and operationalized. The operators should therefore be familiar with the linkages in performing their roles and functions pertaining to the operation of provincial high schools. The purpose of this chapter is to describe the effectiveness of these interorganizational relationships in achieving the goals of provincial high schools. It addresses the fifth and sixth research questions:

1. **To what extent are the linkages between and among the National Department of Education (NDOE), the Teaching Service Commission (TSC), and the Provincial Divisions of Education (PDEs) effective?**

2. **In what ways might these linkages be improved with respect to the operation of provincial high schools?**

The data for this chapter are taken largely from the analysis of interviews. They are supplemented by information from document analysis. This chapter consists of four parts. In the first part the delimitation of powers and the problems of cooperation and coordination are detailed. In the second part the effectiveness of the linkages is discussed. This is followed by a discussion of suggested improvements in the third part. In the last part the findings of the chapter are summarized. Parts 1 and 2 address the question regarding the effectiveness of the linkages between and among the participating organizations, and part 3 responds to the question that sought to discover how the interorganizational linkages between and among the two national organizations and the provincial organizations could be improved.

Delimited Functions and Problems of Cooperation and Coordination

The discussion of the interorganizational contexts in chapter 1 and the structural linkages in chapter 5 have highlighted some of the strengths and weaknesses of the system pertaining to the operation of provincial high schools. To facilitate and promote conceptualization of the effectiveness of the interorganizational linkages between and among the NDOE, the TSC, and the PDEs, it is necessary to restate the roles and functions each of these organizations is delegated to carry out under the provisions of the Education

Act of 1983 (hereafter called the Education Act) and the Teaching Service Act of 1988 (hereafter called the Teaching Service Act). This part is the first of the two that assess the effectiveness of the linkages between and among the interacting agencies.

Under the provisions of the Education Act, functions for providing education were divided between the National and Provincial Governments in Papua New Guinea (PNG). With respect to the operation of provincial high schools, the NDOE is the executive and inspectorial branch of the National Education System (NES). In this capacity it is responsible for the following: (a) determining the provincial high school curriculum and its overall supervision and evaluation, (b) determining the qualifications and the standards required for the registration of teachers, (c) inspecting all schools and certifying and assessing teachers, (d) supervising the implementation of approved plans and policies in relation to education, and (e) disbursing and supervising the expenditure of money lawfully made available for the purpose of education by the National Government.

The PDEs are the administrative units created by the Provincial Governments to implement the educational policies developed by the Provincial Education Boards (PEBs) and passed by the Provincial Governments. The main functions of the PEBs, under the provisions of the Education Act, are (a) in consultation with local level government bodies and education agencies in the province, to draw up and submit for the consideration of the National Education Board (NEB) plans for the establishment and development of provincial high schools in the province; (b) to supervise the implementation of approved plans in relation to education in the province; (c) to hear and determine appeals in cases where the governing body of a school expels a student; and (d) with due regard to the expressed wishes of teachers and education agencies concerned in the province, to have responsibilities in regard to appointment, promotion, transfer, and discipline of teachers who are members of the PNG Teaching Service (Teaching Service). Thus, the PDEs are accountable through the PEBs for a wide range of functions and responsibilities relating to establishing provincial high schools and providing provincial high schools and teachers with educational needs, materials, supplies, and the budgeting for the provincial high school teachers' salaries and the delivery of the pays.

The TSC, under the provisions of the Papua New Guinea Teaching Service Act, is the employer, on behalf of the State of PNG, of all teachers, including those who teach in provincial high schools. In this capacity, the TSC is responsible for the following: (a) exercising a critical oversight of all matters relating to the terms and conditions of service and the welfare of members of the Teaching Service; (b) ensuring that decisions of other education authorities under the Teaching Service Act or the Education Act do not infringe upon or abrogate the rights or the conditions of service of members and, where those rights are infringed upon or abrogated, to give direction or take action necessary to correct the situation; and (c) after consultation with the Secretary of the NDOE, to determine conditions for granting of free-place study leave (at full pay) in institutions outside or inside the country and inservice training of members of the Teaching Service.

The above should reveal that there are functions shared by two or all of the organizations. That is, for some of these functions, each organization is given delimited roles. For example, the advertisement of vacancies and the subsequent appointment of teachers to provincial high school positions is a shared function among these organizations. In a similar way the building of new provincial high schools is a concurrent function of both the NDOE and the PDEs. Given this scenario, problems of cooperation and coordination have been experienced between and among the interacting organizations, as demonstrated in the following sections.

Different Political Power Bases

In the devolution of authority, each of the organizations was granted limited powers in certain activities pertaining to the operation of provincial high schools. Further, each of these organizations is answerable to different "political power bases." Both the NDOE and the TSC are accountable to the National Government, and the PDEs report to their respective Provincial Governments. In addition, within the education system itself there are three policy-making bodies that are independent of each other. According to one senior official of the NDOE:

> We have three policy-making bodies that govern the operation of the three levels of organizations we are discussing. At the national level we have the National Education Board that decides the national policies, and we [NDOE] try to implement them. The TSC has a three-man Commission that decides the terms and conditions of the teachers. Then we have the PEBs in the provinces that make provincial educational policies, and these are implemented by the PDEs. (ND-02)

In these interorganizational linkages different educational authorities, each with delimited functions and answering to different political and administrative authorities, make educational decisions at different levels of the education system. Consequently, there is a need for cooperation and coordination to facilitate information and resource flow. One senior official from the NDOE maintained that even though there are many players in the provision of provincial high school education, the interorganizational linkages "will be effective as long as the . . . organizations follow the requirements of the Education and the Teaching Service Acts" (ND-04). He added that the NDOE, the TSC, and the PDEs are there to take action on their delegated roles, and they should act accordingly. The Teaching

Service Commissioner for Legal Matters added that "the most important thing is to honor the linkages by working together" (TS-01). According to him, although these organizations answer to different authorities, their roles and functions are clearly stated in the educational laws. Therefore, there is a need for all operators to feel that they are part of the same organization. He claimed that "consultation problems arose only when the operators chose to be difficult" (TS-01).

But even though the roles and functions of each of these organizations are set out clearly in both the Education Act and the Teaching Service Act, coordination problems have occurred. One major cause of problems is that because certain functions and roles are delegated to the Provincial Governments, the operators from the PDEs feel that they should run their own affairs and not have anything to do with authorities not under Provincial Government jurisdiction. In the words of the Teaching Service Commissioner for Legal Matters, "I suspected that provincial people were beginning to say, 'I am not of the National Department of Education; I work under the Provincial Department. I come under the Provincial Government, so I have nothing to do with them'" (TS-01)..

One factor, mentioned in chapter 5, is that provincial high school education policy is a concurrent responsibility of both the NDOE and the PDEs. For most provinces technical and financial assistance from the NDOE is most necessary before any expansion in provincial high school education can take place in these provinces. Information sharing between the NDOE and each of the PDEs is necessary. But even when there has been close consultation between the NDOE and the PDEs, coordination problems have still arisen when one of the parties is unable to fulfill its obligations. One Provincial Assistant Secretary of Education described an example of the NDOE making last-minute changes to the planned expansion of provincial high school capacity in his province. In his words:

> Last year we were told that we would have so many primary schools offering Grade 7 this year, so our PEB went ahead and selected the schools and got them ready to begin in the new school year. However, in February this year I was advised, "Sorry you can only have three top-up schools." So I said, "Why tell me now? The people are ready to start their schools. The province spent money and prepared everything. Now you are telling me to go and inform them that they can't have their top-up schools. No, I am not going to tell them." (CP-01)

The discussion in this section seems to suggest that because there is a dual Civil Service, some of the operators working under the jurisdiction of the Provincial Governments do not see themselves as part of the National Civil Service and consequently resist the influence of the National Government in educational affairs of the province. This relationship is often reflected in the implementation of nationally determined educational policies, as elaborated upon in the next section.

Cooperation in Policy Implementation

It has been mentioned earlier in this chapter that because the PDEs report to different political authorities from the NDOE and the TSC, policy conflicts often arise. Under the provisions of the Organic Law on Provincial Governments of 1977, a Provincial Government can also determine developmental priorities specifically for a particular province. Consequently, education is not given high priority by some of the Provincial Governments. Thus, even though the PDE may be very cooperative and willing to implement National Government Education policies, a Provincial Government's concentration of resources on priorities in other areas has often resulted in nonimplementation of nationally determined educational policies as planned. In the words of a senior official of the NDOE:

> In terms of implementation of policies, one of our main stumbling blocks is at the political level with the Provincial Governments. A lot of Provincial Assistant Secretaries of Education, for example, complain that many nationally determined policies have been shelved by the provincial politicians because they don't suit a particular province's priorities, where education is not a high-priority activity. Although the National Government policy priority may be on education, a lot of the provinces may prefer to have economic development or infrastructure development as a priority, for example. There are several provinces where education is a priority, and those are the ones that are far ahead in educational development. (ND-02)

This official continued:

> We decide the national policies here, but there is nothing in the provisions of the laws to enable us to say, "Look, this is a national policy; you must implement it." Provincial Governments are also responsible for making their own laws, and in some cases these conflict with the national policies. This is one of the biggest problems we have. Thus, in relation to the education function, we rely on good will for many things to happen at the provincial level. (ND-02)

During the time of data collection for this study, the provinces were implementing the secondary education expansion policy. This policy required Provincial Governments to identify one provincial high school that could be turned into a secondary school, enrolling students from Grades 9 through 12. The same policy also required that Grades 7 and 8 from the selected provincial high school would be transferred to selected primary schools, that would enroll students in Grades 3 through 8. Third, elementary schools would be established to offer education from preparatory to Grade 2. When implementing this policy, the provinces were required to implement every aspect of the policy in tandem. However, there were some problems in the implementation of this policy by the PDEs. According to the Teaching Service Commissioner for Legal Matters:

> The secondary expansion policy was a National Government initiative imposed on the provinces to implement. In some of the provinces the implementation plans did not take off well. In a lot of cases . . . those that took off did not run smoothly because of problems of perception about roles -- who should do what and so on. (TS-01)

According to this Commissioner, the way Provincial Governments perceived their roles contributed to slow or poor implementation of the above policy. He claimed that instead of carrying through with what was required of them, they waited to be told. He continued:

> I think the province should say, "Okay we are required to implement this policy by the National Department. Therefore, we must get on with planning the infrastructure development to facilitate the implementation of this policy." Instead, they waited to be told rather than get on with it. (TS-01)

Some provinces were not enthusiastic about the secondary education expansion policy. For example, one Appointment Officer shared his perception of why his Provincial Government opposed the secondary education expansion policy. According to him, this particular Provincial Government rejected the secondary expansion policy because the directions came from the National Government and were in competition with what his Provincial Government wanted to do (EP-02). The Provincial Government had earlier adopted a compulsory education policy that required all children to be educated to Grade 10, through the normal school structures of Grades 1 to 6 in primary schools and Grades 7 through 10 in provincial high schools. This plan required all provincial high schools to be expanded and was different from that of the National Government policy.

Summary

In this part of the chapter, the roles and functions delegated to the participating organizations under the provisions of the education laws were restated. This was followed by a discussion of the delimited roles and functions arising from the resultant structure and the problems of coordination and cooperation that resulted. The discussion revealed that because the provision of provincial high school education is a shared responsibility and the participating organizations are answerable to different political authorities, problems of cooperation and coordination have arisen in the interorganizational linkages. Cooperation in the implementation of nationally determined educational policy is affected by the fact that provincial high school functions are shared among the organizations. Priority placed on education varies among the Provincial Governments. Further, the perception of how change in provincial high school education should occur also varies between the National and some Provincial Governments; consequently, some provincial authorities wait to be given all the resources before they cooperate, and those with plans of their own resist National Policies. The presence of the dual civil service system had led to some degree of division in that some provincial operators regard themselves as separate from the national operators and resist cooperation. In the next section the participants' perceptions of the effectiveness of interorganizational linkages is detailed.

Effectiveness of the Linkages

The scenario developed above seems to indicate that all is not well between and among these organizations. Given the nature of duties delegated to each of these organizations, the researcher assumed that problems of coordination and cooperation were likely. Thus, the participants were asked to make a judgment about the effectiveness of the linkages. Effectiveness in this context refers to the regular flow of resources and information, including regular and mutual consultation and liaison, between and among these organizations. This part provides answers to the research question that sought to assess the effectiveness of the linkages between and among the NDOE, the TSC, and the PDEs.

What follows in this part is the participants' perceptions of the effectiveness of interorganizational linkages among the participating organizations. The information generated from the responses is discussed in four sections. In section 1, the extent of effectiveness between and among these organizations is detailed. This is followed by a discussion of the factors contributing to the effectiveness of the interorganizational linkages between and among the organizations in section 2. In section 3, factors inhibiting effectiveness are summarized. In the last section improvements suggested by the participants are presented.

Extent of Effectiveness

An analysis of the interview data revealed that in general, the participants' perceptions of the effectiveness of interorganizational linkages between and among the member organizations varied from "just satisfactory" to "very effective," as demonstrated in these statements from several participants. In the words of one senior official of the TSC:

> I think *satisfactorily* really is the right term to use in answering your question. The policies are satisfactorily implemented. I think we should be making sure that the

> schools are better served by the NDOE, the PEB, and the TSC. But sometimes they are not. In general terms the schools are satisfactorily served by the three [types of] organizations. (TS-02)

A Senior Professional Assistant from one PDE agreed and appeared to be even more positive. In his words:

> With regard to policies we'd like to develop, there is always consultation at such conferences as the Senior Education Officers' Conference. So I think the working relationship, as I've seen it, is good. The good thing about it is that we are united. We work together towards our common goal. (AS-05)

From the perspective of the First Assistant Secretary for Standards in the NDOE, the interorganizational linkages among the interacting organizations were very effective. In his words, "I'm one person who believes in more discussion and interaction between the organizations. From my experience in working with those organizations, I can say that we have very effective relationships" (ND-16). The degree of effectiveness of the interorganizational linkages between pairs of organizations in this network varies somewhat. The degree of effectiveness of the interorganizational linkages is greater between some pairs than others, as described below.

Effectiveness of the relationship between the NDOE and the TSC. There was unanimous agreement among the NDOE and the TSC participants that the linkages between the two organizations are very good, as exemplified in the statement by an high ranking official of the NDOE. He said:

> We rely a lot on the services of the TSC. . . . We have a very good relationship because of our proximity with them. We are in the same building and liaise closely with them. In fact, we have a very good working relationship with the TSC. . . . We share information with them. We even include them in the Secretary's Staff Meeting, that is the meeting of the National Secretary with the senior staff in the Department. (ND-02)

One senior official of the TSC agreed that both the TSC and the NDOE maintained very good relationships. In his words:

> We have not really experienced any major conflicts between the Commission and the Department of Education. Since 1987, when I came to the Commission, we've maintained a very good and close working relationship with the National Secretary and his senior staff. (TS-02)

In summary, the degree of effectiveness of the interorganizational linkages between the NDOE and the TSC is judged to be very high. This effectiveness is promoted by the proximity of the two organizations.

Effectiveness of the linkages between the NDOE and the PDEs. The effectiveness of the linkages between the NDOE and the PDEs was judged satisfactory by most participants. The relationships are effective as long as the authorities stay within their roles and functions. According to a senior official of the NDOE, problems are experienced only when some operators fail to recognize and maintain that their task is to provide educational services. He maintained that having the right mentality toward one's purpose was the key to maintaining good linkages. In his words:

> I think where you have the attitude to bring services to the province, that contributes to good relationships. We know we have a common goal. We know we want to educate the children. If all of us have that view and we all try to work hard at it, we may find that how we do our work may become more effective. . . . When the attention of some of the operators is focused on a different goal, things do not work out well. (ND-04)

From the perspective of the PDEs, the effectiveness of the linkages between them and the NDOE depends on the clear understanding and acceptance of the roles and functions under the provisions of the Education Act of 1983. In the words of one very experienced Provincial Assistant Secretary of Education:

> I have not experienced any major conflicts in finding out what is the responsibility of the province and what is the responsibility of the National Department in terms of establishing provincial high schools. In my experience, I have built provincial high schools and worked very closely with the Secondary Inspectors. They are the chief implementers of the secondary curriculum in the provinces and chief advisors on all matters regarding secondary education. They are National Department of Education Officials, and because they liaise with me all the time, I have not encountered any problems at all. (AS-02)

According to one senior official of the NDOE, the relationship is satisfactory because the Provincial Assistant Secretaries of Education who reached their positions through the ranks of teachers understand the provisions of the Education Act. As teachers, these officials had worked under the provisions of the education laws and subsequently became familiar with the delegation of functions. In his words:

> There is very little disagreement. A lot of Provincial Assistant Secretaries of Education went through the education system. They were former teachers or lecturers, and therefore they understand the system. Some of them have a very good grasp of the Education Act. Therefore they understood well the provincial functions in relation to education. (ND-02)

Because of the understanding and acceptance of the roles and functions by most of the Provincial Assistant Secretaries of Education, there is "good will" between the two organizations. Thus, even though the Provincial Assistant Secretaries of Education worked under the Provincial Department Secretary, an high ranking official of the NDOE maintained that interaction and cooperation between his office and that of the Provincial Assistant Secretaries of Education was good. He continued:

> There is openness between Provincial Assistant Secretaries of Education and the NDOE in discussing issues. I can pick up the phone now and ring up the Provincial Assistant Secretary in Milne Bay and ask him about what is happening there. And he will give that information to me very easily. He will not say, "No, I cannot give it to you because you are a National Department and I am a Provincial Department employee and therefore not responsible to you." He will give it to you with open arms. He will even fax it to you if you ask him to. That is particularly from my office. We have a very good understanding between us. When I want information from them, they give it to me. If they want some advice, they ring my office any time of the day and I will give them as much help as I can. (ND-02)

Although, by and large, the linkages between the NDOE and the PDEs are judged effective, there have been occasions in which the PDEs, through the behavior of the Provincial Assistant Secretaries of Education, have been found to be uncooperative. For example, the Secondary Inspector's role is basically to advise the PEB, but sometimes provincial authorities do not accept the advice given. The Secondary Inspectors blamed this on lack of cooperation from the Provincial Assistant Secretaries of Education. The Secondary Inspectors complained that often some of the Provincial Assistant Secretaries of Education do not read the school reports. Even when they do, they do not implement the recommendations that are made with regard to teachers who are not performing satisfactorily. Consequently, the problems identified in the reports continue. One Secondary Inspector shared his frustration with regard to lack of cooperation from the Provincial Assistant Secretary in taking action against the teachers he had charged for misconduct. He stated:

> I charged four teachers who could not perform at the school level, and the information was sent to the PEB with copies to the TSC. The TSC is now waiting for the PEB to make a decision on what will happen to these people. But the sad thing is that the PDE, through the Provincial Assistant Secretary [of Education], is using these people in the office as clerks or in some other capacity. This is not in the best interest of the PDE because one day this office could end up teachers who are judged unproductive. (ND-13)

The same Secondary Inspector claimed that this problem often occurs in provinces "where they have their own provincial education act. Often there are conflicts between the TSC and the provincial authorities" (ND-13).

This discussion seems suggest that the interorganizational linkages between the NDOE and the PDEs are effective. The effectiveness of the linkages are enhanced by the common goal of providing education and the understanding and the acceptance of the roles and functions as provided for under the provisions of the Education Act of 1983. The effectiveness of the linkages, however, is compromised when the Provincial Assistant Secretaries of Education fail to implement the recommendations made by the Secondary Inspectors in their quarterly school reports.

Effectiveness of linkages between the TSC and the PDEs. Whereas the participants from the NDOE and the PDEs judged their relationships to be effective, the same was not found between the TSC and the PDEs. The participants from the TSC claimed that the PDEs are reluctant to comply with and implement the TSC decisions and directions. The response from one senior official of the TSC was representative of the opinion expressed by his colleagues. In his words:

> The Provincial Assistant Secretaries of Education are servants of the Provincial Governments; consequently, the consultation and coordination between them and us is not effective with regard to terms and conditions of service of the members of the Teaching Service. . . . Generally, with regard to the PEBs implementing some of the decisions we make, we do have some delays. As I was saying earlier, some of the appointing authorities are reluctant to implement our decisions. I can recall an example from last year. We made certain decisions and the PEBs were reluctant to have them implemented. And sometimes it took them two to three months before they finally implemented our decisions. (TS-02)

The participants from the PDEs were of the opinion that the TSC was an extra link in the process contributing to slowdowns in the appointment of teachers. According to one Provincial Assistant Secretary of Education, when matters are referred to the TSC, feedback does not come very quickly. He explained:

> I think that one needs to ask the question, "Is it necessary to have the TSC?" We charge a teacher, and the PEB makes the decision. That decision is that the teacher be dismissed. That's it; you only want the TSC to approve your decision. Or if the teacher has appealed against the decision, then they should inform you. But sometimes it is very difficult to receive any feedback from the TSC. (CP-01)

In summary, there was a greater degree of disagreement between the TSC and the PDEs. The interorganizational linkages between the two organizations were judged to be just satisfactory. The PDEs did not seem to perceive the TSC as playing a useful part in the appointment of teachers to provincial high schools.

Factors Promoting Effectiveness

Many participants provided explanations to justify their perceptions of the effectiveness of the linkages. From these, seven factors promoting interorganizational effectiveness were identified: a common goal, personal familiarity, proximity, quality of leadership, knowing and understanding the roles and functions, the Senior Education Officers' Conference, and representation on education boards. The contribution made by each of these factors is detailed below.

A common goal. One high ranking official in the NDOE thought that because these organizations had "a common goal," they worked hard to understand each other. In this sense many problems are resolved before they can escalate (ND-04). Sharing a common goal meant that the participating organizations are "interested in the same teachers and the students" (TS-04). From the perspective of the TSC, an Inspector explained:

> The NDOE, the TSC, and the PEBs are trying to make sure the teachers are employed and given what they are entitled to. The students receive benefits from the schools. So with that common interest, I think those organizations have worked satisfactorily. There are always attempts to understand each other. (TS-04)

Personal familiarity. Similarly, the First Assistant Secretary for Standards in the NDOE was of the opinion that because of "personal familiarity" of the operators with one another, effectiveness of the linkages was maintained. In his view, because the senior officials in the NDOE have held those positions for a long period of time, they have come to know the operators in the other organizations and thus communicate and interact easily with them. An examination of the backgrounds of the participants revealed that the great majority of them had one thing in common: They reached their positions through the ranks of teachers. During their term as teachers they became acquainted with one another before taking up their current leadership positions.

Proximity. One of the reasons that the relationship between the NDOE and the TSC was judged to be most effective is the proximity of the two organizations. As stated earlier in this chapter, these two organizations are housed in the same building. Consequently, contact between the operators is continuous. The Senior Professional Assistant with the School Administration and Liaison Division (SALD) observed the advantages of proximity. He said:

> I believe that because of the closeness of the set-up with the TSC, you liaise face-to-face with them. This is faster than when you use the telephone. Depending on a telephone conversation may not be productive because you don't know if the guy at the other end will do what you request right away. Often when you'd get back to them the next day, they would say, "Oh I'm still working on it." So that's a problem. But I think the closeness of the institutions makes us work like one department. I can go to the TSC and talk with them and get things done in a short time. (ND-09)

A senior official of the TSC agreed. He added that because of the proximity, communication between the two organizations is "a constant two-way process" (TS-02).

Quality of leadership. The quality of leadership in both the NDOE and the TSC was identified by the Deputy Secretary of Education for Administration as a factor contributing to the effectiveness of the linkages between and among the NDOE, the TSC, and the PDEs. In his words:

> The relationship is effective because of the quality of leadership and the personality of the leaders in our Department and the TSC. The National Secretary of Education and the Teaching Service Commission Chairman understand the nature of each other's tasks and are able to give and take. This also applies to the provinces. (ND-12)

In a similar vein, an Inspector with the TSC described his superiors as people who were understanding and caring. According to him, "The Commission is made up of people who seem to be understanding of what is happening, so they are able to accept conflict and look at it from a professional perspective and not from a personal perspective" (TS-04). This kind of attitude helps to maintain cordial relationships between the TSC and the other participating organizations.

Knowing and understanding the roles and functions. As stated earlier in this chapter, familiarity with the division of roles and functions contributes to the cordial relationship that is present in the interorganizational linkages among the NDOE, the TSC, and the PDEs. According to one Provincial Assistant Secretary of Education, the most important thing in maintaining effective relationships is to realize what the systems are and how they operate . Whoever works in them must work according to the system. Using himself as an example, he said:

> I know the provisions of the Organic Law on Provincial Governments that divided the functions between the Provincial and National Governments. . . . I think the key thing here is understanding. And for me, I understand the system. I understand the system and how it should operate, and I make sure that the people

> who are engaged in these various operations interact in harmonious relationship to make the system work. (AS-02)

Senior Education Officers' Conference. From what has already been said about the Senior Education Officers' Conference in chapter 5, it is evident that this conference is regarded by senior officials of all of these organizations as a useful structure that has contributed to the effectiveness of the interorganizational linkages among them. The quotations included below reflect the participants' perceptions of the role the Senior Education Officers' Conference plays in promoting cohesiveness in the education system. In the words of a senior official of the NDOE:

> The Senior Education Officers' Conference has been able to tell us how the provinces have implemented certain policies. . . . Once we decide on something, we report back to each other a year later. We ask each other about what is happening. Based on that feedback, we try to review our previous decisions to facilitate implementation. In that way I guess the linkages have been effective in helping us to implement certain decisions. (ND-02)

From the perspectives of the PDEs, the Senior Education Officers' Conference is a good source of information . In the words of one Provincial Assistant Secretary of Education:

> This conference is one very important source of information. . . . We are briefed on changes in educational laws and so forth. . . . We need to be well informed to pass this information on to members of the various committees in the provinces. (AS-01)

Another Provincial Assistant Secretary of Education perceived the Senior Education Officers' Conference not only as a mechanism for sharing information on educational development in the country, but also as the structure through which the provinces are able to influence the national education policy. He explained:

> I think it plays two basic roles. One is sharing information right across the country. Because every Provincial Assistant Secretary [of Education] is a member of that conference, we share with one another what is going on in our respective provinces. The problems that we experience in the provinces are shared in the conference. This plays a part in guiding the NDOE on what type of policies it should come up with. (CP-01)

The Senior Education Officers' Conference was perceived by most of the senior officials as a mechanism that promoted face-to-face interaction among the Provincial Assistant Secretaries of Education and the senior officials from both the NDOE and the TSC. The Provincial Assistant Secretaries of Education valued this interaction because it provided a situation in which "when the questions about education are raised, they are responded to by a most senior official rather than a junior official" (AS-04), as is the case quite often.

Representation on education boards. One of the characteristics of the PNG education system is the number of boards that are involved in educational decision making. These include the National Education Board (NEB), the Provincial Education Boards, and the TSC. The NEB is the highest civil service structure for national education policies. It has representation from a wide spectrum of the community, including the Provincial Governments. The PEBs are responsible for provincial education policies. Their membership is drawn from within the province. There is no National Government representation. The TSC, on the other hand, is a three-member commission that is responsible for all policies relating to the members of the Teaching Service. The participants perceived representation on the boards as a means by which a cross-section of the community is allowed to provide input into educational decisions. This representation, according to the First Assistant Secretary for Finance and Administration, promotes increased levels of contact and discussion. This interaction "assists the NDOE to make good quality decisions that are based on sound judgment and information" (ND-07). The same official added:

> The good thing about our system is that we have these bodies like the PEB, the NEB, and the various other committees. The representation on these boards and committees results in linkage between the TSC, PDEs, and the NDOE. I think decisions that are eventually made are much richer and are better decisions because of that. (ND-07)

In this section factors promoting effectiveness in the interorganizational linkages were discussed. Amongst these, the Senior Education Officers' Conference appeared to be the major organizational structure for interaction to promote problem solving and greater cooperation. In the next section factors inhibiting the effectiveness of the interorganizational linkages between and among the NDOE, the TSC, and the PDEs are presented.

Factors Inhibiting the Effectiveness of Interorganizational Linkages

The participants also pointed out that there are times when interorganizational linkages are not effective. They identified two factors that contribute to the ineffectiveness of relationships between and among the participating organizations: slowness of the education system in responding to change and the occasional poor communication and dialogue. These are elaborated further in the following paragraphs.

Slowness of the system to change. One of the major inhibitors to effective interorganizational linkages identified by the participants is that the education system, as it is now, does not change quickly enough to allow for innovation. In the words of the Assistant Secretary for Inspections and Guidance, "I think one might say that the system works well, but it is not changing quickly enough to accommodate new innovations. It is a system that grinds slowly and does not allow for rapid change" (ND-03). This official added that decision making among these organizations is slow because of the fact that often the division of functions is not as clear as one would like. Consequently, the operators in these organizations are forced to act cautiously. In his words:

> I think it's caution really, people trying not to tread on each other's toes. And to some extent it's because the functions and the responsibilities are not always clear. It's not always clear if a role belongs to the province or the NDOE. Therefore, in implementation, role confusion requires closer consultation and care being taken not to overstep the authority that is there. . . . Consequently, it does not lead to rapid action, I'm afraid. (ND-03)

These statements reveal that delegation of roles and functions under the provisions of the educational laws sometimes is not very clear. Thus, the operators have to be cautious when such situations arise. These experiences were seen as the cause of the inability of the system to adapt quickly to change.

Inability of the system to act quickly. Participants also maintained that present interorganizational linkages sometimes do not promote quick action and reaction. For example, the Assistant Secretary for Policy, Planning, and Evaluation in the NDOE claimed that the system is too slow in processing and paying teachers' salaries. According to him, the problem is caused by two different organizations being responsible for this function. He elaborated:

> One of the biggest problems is the delay in the payment of teachers' salaries. This is a recurring problem. The problem is sometimes caused by the provinces not submitting the resumption of duty forms in time for the personnel section to process the teachers' salaries. . . . The cooperation of the provincial education office is very important in the sense that they have to make sure that the resumption of duty forms are completed by the teachers and submitted to us. It is [the NDOE's] job to make sure that the resumption of duty forms that have been submitted are processed and the cheques paid to the teachers. (ND-01)

The PDEs, on the other hand, blame the national authorities for the delay. One Provincial Assistant Secretary of Education from a very affluent province agreed that there are too many situations in which teachers are not being paid on time. He lamented the fact that although these teachers have approval from the PEBs, their salaries are not processed quickly by the national authorities. (The reader is reminded that teachers' salaries are budgeted for by the provinces, but the action to process and pay teachers is carried out by the NDOE on receipt of relevant documentation from the PDEs.) When the claims of this Provincial Assistant Secretary of Education are compared with those of the Assistant Secretary for Policy, Planning, and Evaluation above, these opinions seem to reflect a lack of understanding of the process and of the cause of the problems. The above comments suggest that the PDEs blame the NDOE for the delay in the paying teachers. The NDOE, on the other hand, thinks the PDEs create this delay.

Another joint function in which the slowness of the system is revealed is the process of charging teachers for misconduct. The charging function, as stated in chapters 4 and 5, is a TSC responsibility delegated to the NDOE to carry out through the Secondary Inspectors. The problems associated with the fulfillment of this function include taking action on the reports that Secondary Inspectors submit. In the first place, the Secondary Inspectors submit their reports to the Provincial Assistant Secretaries of Education for presentation at the PEB meetings. One Secondary Inspector lamented the fact that even though the Secondary Inspectors do their part in charging teachers for misconduct, inactivity by the PEBs often results in legal requirements not being fulfilled; consequently, the charges are often dismissed. He gave an example of such a situation:

> I charged a teacher because he did something that was not acceptable. I then forwarded the completed documents to the Provincial Assistant Secretary of Education to present at the next meeting of the PEB. In the meantime, the teacher was suspended. The law requires that the PEB meeting must be held within 14 days of the charges being laid. At this meeting the teacher is to be invited to respond to these charges. But often, like in this case, the PEB did not meet within the required 14 days. Consequently, the charges lapsed, and the teacher was free to remain in the school. (ND-13)

This Secondary Inspector argued that this state of affairs does not bear well with the Secondary Inspectors. He explained that when PEBs fail to act on the charges laid on teachers by Secondary Inspectors and charged teachers return to the classroom, the Secondary Inspectors are made to look foolish. He continued, "The Inspector had gone out and laid charges against a teacher. But not long after the Inspector had laid the charges, the teacher was in another school teaching. This is an area of frustration experienced by Secondary Inspectors" (ND-13).

The part to be played by the Provincial Assistant Secretaries of Education in ensuring that charges are properly laid against teachers is critical. The failure on their part has often contributed to disciplinary action not being taken against offending teachers. Consequently, this makes it difficult for Secondary Inspectors to maintain respect in the eyes of teachers.

Inconsistent communication and dialogue. It was mentioned in chapter 5 that rules and regulations exist to govern the activities of the operators in these organizations. That statement is true from the perspective of everyone abiding by the processes that have been established to facilitate the flow of information and resources between and among these organizations. But in general, inconsistent communication and dialogue still occurs between and among these organizations. One major weakness in the linkages is the inconsistent flow of information from the PDEs to the NDOE. According to one high ranking official of the NDOE, although there is regular communication from the National Department to the PEBs, the NDOE does not always receive information from the PEBs. He elaborated:

> The decisions we make at the NDOE are communicated to the provinces through the Secretary's Circulars or Instructions. But at the provincial level, because they deal with each province, I guess we don't get much feedback from them. Some provinces submit minutes of their PEB meeting for us to see what is discussed at the provincial level and what is being implemented. But most provinces don't do that. (ND-02)

From the perspective of the PDEs, constructive feedback from the TSC and the NDOE is required. The Superintendent of Provincial High School Operations in one PDE suggested that communication and dialogue could be much improved if the PDEs, either directly or via the PEB, received useful comments from both the NDOE and the TSC on the information they sent to the two national bodies. This official maintained that rather than just acknowledging the receipt of information from the PDEs, these national bodies should make comments on the quality of the data received, on how complete they are, and on what the PDEs could do to improve information flow.

This section discussed the factors that inhibit the effectiveness of the interorganizational linkages between and among the three organizations. It revealed that not only is the education system seen as too slow to act, but that there is also inconsistent communication from the PDEs to the two national bodies.

Summary

In this part of chapter 9, the effectiveness of the interorganizational linkages between and among the NDOE, the TSC, and the PDEs was discussed in three sections: the extent of the effectiveness, factors promoting effectiveness, and factors prohibiting effectiveness.

The discussion of the extent of the effectiveness was focused on describing the extent of the effectiveness of linkages between pairs of organizations. It revealed that the effectiveness of linkages is greater for some pairs than for others. For example, the relationship between the NDOE and the TSC was judged to be very effective. The effectiveness of linkages between the NDOE and the PDEs varies with individual PDEs. To some, the relationships were judged to be just satisfactory, whereas with others, they were seen as effective. The relationship between the TSC and the PDEs was generally seen to be satisfactory although at times strained.

Under factors promoting effectiveness, discussion centered on detailing the seven factors that were seen to facilitate interorganizational linkage effectiveness: (a) a common goal, (b) personal familiarity, (c) proximity, (d) quality of leadership, (e) knowing and understanding the roles and functions, (f) the Senior Education Officers' Conference, and (g) representation on education boards. Under the factors inhibiting effectiveness, the discussion focused on three factors that seemed to negatively affect the effectiveness of the linkages: (a) slowness of the system to change, (b) inability of the system to act quickly, and (c) inconsistent communication. In the next section improvements proposed by the participants are discussed.

Suggested Improvements

In chapter 6 several strategies for the improvement of resource and information flows between and among the NDOE, the TSC, and PDEs were identified. The discussion of suggested improvements in this part of the chapter is focused on reflecting the participants' general perceptions of the overall state of the interorganizational relationships. Inevitably, some of the issues raised here are similar to those detailed in chapter 6.

The discussion of the effectiveness of the interorganizational linkages indicated that numerous difficulties are experienced by the operators in the participating organizations. These operators also made suggestions to improve the relationships between and among the organizations. These are discussed under increased consultation and dialogue, decentralized TSC office, and the creation of a single-line department.

Increased Consultation and Dialogue

Although, by and large, the interorganizational linkages are effective to the extent that policy objectives are achieved eventually, their effectiveness would be much improved through increased consultation and dialogue. Senior officials from all of the organizations recognized the need for increased consultation and dialogue. One of the important findings in this chapter is the inconsistent information flow from the PDEs to the NDOE and the

TSC. PDE officials are answerable to their respective Provincial Departments, and therefore many of them do not see it as their duty to provide information to the national bodies as well. To overcome this obstacle, an high ranking official of the NDOE suggested that provisions should be made for these organizations to have representation in each other's policy-making bodies. In his words:

> I think our relationship could be improved by having representation on the various boards. For example, on the NEB we have representatives from the Provincial Governments. Likewise, the TSC could make allowance for provincial representation on their council. Similarly, we should be allowed representation on Provincial Education Boards. I think that might improve our working relationships in terms of sharing information both ways and building up rapport with each other which is important. At the moment we have broad representation on the NEB, but it is not happening in the other two bodies. If some provision can be made for our representation at the Provincial Education Board level, it would improve information sharing. (ND-02)

Increased consultation and dialogue between the NDOE and the PDEs, according to the Assistant Secretary for Policy, Planning, and Evaluation in the NDOE, are important to improve communication of policies. He explained how this could be achieved:

> One way to improve the relationship between the NDOE and the PDEs is to provide for more and better ways of communication between us and the provinces. Often the people in the provinces do not understand the polices. What is required is to send out information about a policy and follow it up with face-to-face discussion at the province level to explain the details about the policies. (ND-01)

Another way of ensuring that the national policies are understood by the provincial officials is to involve the PDEs in policy making through more dialogue. The Superintendent of Staff Development Unit (SDU) with the NDOE postulated that more involvement of the PDEs in national educational policy making is one way of minimizing conflicts. In his words:

> The more we involve the provinces in policy or administrative matters, the better it will be. We are not doing enough of that. At our level we often work without consulting them because we think that what we are doing are national functions and the provinces do not have to be involved at the policy level. We tend to say, "Those are your functions, and these are our functions. You make decisions in yours and we in ours." This thinking has caused friction between us and them. (ND-08)

Similarly, the Superintendent of Curriculum in the NDOE also proposed that more consultation and dialogue between the national bodies and the PDEs should be encouraged to iron out misunderstandings and fear related to implementing new curriculum policies. He argued that insufficient interaction between the NDOE and the PDEs, with regard to policy implementation, takes place between the national and provincial authorities. Further, the interaction that did take place was too often left to the "small boys, while the big boys are sitting . . . and making policies" (ND-10). He explained that the "big boys" should really sit down with the "small boys," take up an issue, and develop it. He gave an example of a situation in which a very senior official worked with curriculum implementers. In his words:

> We've had one such meeting recently where we looked at implementing elementary-level education. The current Acting National Secretary of Education and we at the curriculum unit organized a workshop for all the senior officials to come together and go over the various assumptions that would facilitate the implementation of elementary education. We looked at the [proposed] elementary education curriculum and how it would be taught using the vernacular. A lot of questions were raised about how one can teach mathematics and science concepts in local languages. (ND-10)

According to the Superintendent of Curriculum in the NDOE, the meeting went a long way in laying to rest many of the fears that the provinces had about implementing the elementary education policy.

Another weakness in the interorganizational linkages has been the inconsistent flow of information between the TSC and the PEBs. In particular, the Provincial Assistant Secretaries of Education claimed that more dialogue between the TSC and the PDEs with regard to the discipline of teachers is required to expedite decision making while maintaining harmonious relationships. The general view is that the TSC should check with the PDEs any information it receives from individual teachers before acting on it. One Provincial Assistant Secretary of Education explained:

> With respect to the TSC, one of the things we need to improve on is to check information that is coming from teachers. For example, we find that a teacher is not at school in the last three months. He's been sitting in the village because he reckons his father is too old. We then take him off the payroll. . . . The teacher walks in to the TSC and says, "The PDE took me off the payroll. I don't know why." When the TSC hears this, they should then ring me and ask, "Why is this fellow making this complaint?" But instead, they pick up the phone and instruct the personnel officer, "Put this teacher back on the payroll. The Central Province has

> no reason to suspend him because there are no records in here to show that this officer has been suspended from the payroll." As far as I am concerned, to make quick decisions, we need more consultation. (CP-01)

Throughout this thesis the capacity problem within the PDEs has been mentioned several times. The operators from the PDEs agreed that there is a capacity problem. Recognizing this, the participants recommended that more dialogue and communication can be promoted through regular visits to the provinces by personnel from the NDOE and the TSC. These could facilitate national policy implementation. In the words of the Provincial Assistant Secretary of Education from the Gulf Province:

> The officials from those two organizations have paid visits to us, but we'd like to see them more regularly. . . . In fact, we'd like to see the frequency of those visits increased so that people at the province and district levels can be helped to provide services at the grassroots level. (AS-04)

The Senior Professional Assistance from one PDE agreed to the idea of more regular visits by the officials from both the NDOE and the TSC to help the provincial personnel with tasks they are asked to accomplish. According to him:

> There is often poor communication and a bad working relationship between us and the officials from those two organizations. We would like to see a closer tie that would help us work together. The personnel from the headquarters should come and visit us and see where we are heading and how we are dealing with particular problems they ask us to look into. This way, if we are not doing a job properly, they can assist us and help us out. (AS-05)

One Appointment Officer from a PDE lamented about the overdependence on written communication. He suggested that the visits to the provinces by officials from the National Department should be scheduled to help provincial operators. He pointed out that these visits take place only if there is a problem. In his words:

> Most of the time the linkages with other organizations are through paper. To me, I feel that we could do better . . . if we have personnel from those two organizations come to the provinces and meet with the education officials here. This would promote mutual discussion of issues. There may be questions that we can ask directly of the person who is physically present. In my experience, people only come when there is a problem. When the officials come from the national level, they only meet the Provincial Departmental people or the politicians, but not the people who are really dealing with implementation. (EP-02)

The Provincial Administrative Office of one PDE reasoned that there is a need for these organizations to forge a closer working relationship. According to her, instead of providing information only, the NDOE and the TSC should also provide technical assistance to the PDEs. She went on to suggest that her Provincial Assistant Secretary of Education should work closely not only with the Provincial Department Secretary, but also with the National Secretary of Education and the Teaching Service Commission Chairman. In her view there are two reasons for wanting to establish a closer working relationship with the two national bodies. She stated:

> Under the present set-up, the Provincial Assistant Secretary of Education reports directly to the Provincial Department Secretary. If we want effective linkage between the PDE, the NDOE, and the TSC, the Provincial Assistant Secretary [of Education] should also report to the National Secretary of Education, so that the Secretary will be aware of what is happening at the provincial level. In this way we can obtain support from both the NDOE and the Provincial Department. If we don't get help from the Provincial Department, perhaps we can get it from the NDOE. (EP-03)

Furthermore, she argued, there is a need to forge better understanding and closer links with the TSC because "the teachers we are looking after are people working under the Teaching Service Commission. Thus, whatever happens, the teacher will complain to the Teaching Service Commission, not to the Provincial Department Secretary" (EP-03).

In summary, the participants recognized the need for increased consultation and dialogue among the NDOE, the TSC, and the PDEs. They suggested that this could be achieved in several ways. One would be to provide for representation on each other's policy-making body. A second is to increase personnel visitation by national officials to hold face-to-face discussions on implementation of new policies and provide technical assistance for resolving difficulties that PDEs face. A third approach would be to make provision to increase PDEs' participation in national educational policy making. Fourth, the participants called for the Provincial Assistant Secretaries of Education to interact with the TSC and the NDOE in the same way that they do with their Provincial heads.

Regionalizing the TSC Office

Although several participants from both the NDOE and the PDEs perceived the TSC as an extra link in the operational process that should be abolished, participants from the TSC and others did not agree with this view. In their view the linkages with the PEBs would be improved if the TSC office were regionalized. This idea is also supported by several participants from the PDEs, as indicated in the statements quoted below. The participants from the TSC argued that too often the affairs of teachers are mismanaged by PEBs. Because of the distances involved, the teachers are not able to receive the assistance they deserve from the TSC. These participants argued that TSC offices in the provinces would create a better link between them, the PEBs, and the teachers. In the words of the Teaching Service Commissioner for Operations:

> We are hoping that one day, when money becomes available, we will establish our offices either in the regions or in the provinces, where we can communicate better with the other authorities. This way there will be a direct link in the province between the Commission, the PEBs, and the teachers. (TS-03)

The Special Project Officer with one PDE agreed that PNG is too large to have the TSC located only in Port Moresby. He argued that regional offices should be established to provide for more direct linkages. In his words:

> I think the Teaching Service Commission is too far away from us. Papua New Guinea is too big to be served from one office only. What they could do is to develop four branches so that a separate office would deal with one region only. If this is done, we can go directly to the particular regional office for services. Problems can be easily detected and attended to. (EP-04)

The Provincial Assistant Secretary of Education from the Eastern Highlands Province pointed out that under the present arrangements teachers are TSC subjects and the PDE is the linkage between the TSC and the teachers. When teachers communicate with the PDEs, they talk about their terms and conditions of service as stipulated under the provisions of the Teaching Service Act and supervised by the TSC. In order to serve teachers' needs better, there is a need for a TSC office in the provinces. He explained:

> Because of the isolation, teachers are not being served properly. I'd like to see the TSC being directly represented in the provinces so that they can deal with teachers' needs right here. If they are here, they can advise me on teachers' rights and needs, and I can make decisions and act quickly. (AS-03)

This discussion would seem to suggest that there is a need for the TSC to decentralize its offices, at least at the regional level, to improve interorganizational linkages with the PEBs and the PDEs. In the next section proposals relating to the appointment of the Provincial Assistant Secretaries of Education by the National Secretary of Education are presented.

Appointment of Provincial Assistant Secretaries of Education by the National Education Secretary

Even though the roles and functions of each of the participating organizations would appear to be clear, they do not seem to be reflected in the interorganizational linkages. As highlighted in chapters 6 and 7, there are certain interorganizational linkage problems that are caused by the nature of the present structure. An overwhelming number of participants argued that the two tier organizational structure, as it is now, is an obstacle. Because the PDEs and the PEBs report to the Provincial Governments and the NDOE and the TSC answer to the National Government, the NDOE cannot force the PDEs or the PEBs to comply with national policies relating to provincial high schools. Among the Provincial Assistant Secretaries of Education, the common perception is that the flow of resources, and indeed the delivery of educational services, would be much improved if they and their subordinates were answerable to the National Secretary of Education. To this effect, the Senior Education Officers' Conference of October 1995 passed a recommendation that read: "That the position of Provincial Assistant Secretary be [a] designated position" (Department of Education, 1995, p. 84). What this means is that if the Provincial Assistant Secretary positions were designated, the National Secretary of Education would be responsible for approving the persons appointed to these positions. The reason for this suggestion is that under the present structure, the National Secretary of Education has to go through the Provincial Department Secretary to communicate official National Government policy to the Provincial Assistant Secretary of Education. This is a long process and not conducive to effective and efficient national policy implementation. A direct link between the Provincial Assistant Secretaries of Education and the National Secretary of Education would speed up national policy implementation. Suggestions made by several participants capture the reasons behind the call for the appointment of Provincial Assistant Secretaries of Education to be approved by the National Secretary of Education. The First Assistant Secretary for Standards in the NDOE argued that because the Provincial Assistant Secretaries of Education are appointed to their positions by the provincial authorities, the National Secretary of Education cannot direct them. He explained:

> I think the way to improve the interorganizational linkages is for the Provincial Assistant Secretary positions to be designated. In this way the National Secretary of Education will have the authority to appoint these people without political interference. I think that will improve relationships and communication. It would also have a greater effect on implementation of policies, because the National Secretary of Education will say to these people, "I've decided this; you implement it." This will enhance stability and continuity at the Provincial Assistant Secretary of Education level. At the moment, as you know, he cannot direct Provincial Assistant Secretaries of Education. (ND-16)

An high ranking official of the NDOE agreed. He suggested that if the National Education Secretary had the responsibility to appoint Provincial Assistant Secretaries of Education and got them to report to him instead of to the provincial level administrator, a lot of the bottlenecks in the system could be overcome. Because the line of communication would be direct, the National Education Secretary could instruct them to provide him with information on how national policies are being implemented in their particular provinces. The information would help the NDOE to judge how well a policy is being implemented and where action needed to be taken to make improvements. (ND-02)

One problem associated with resource and information flow, as mentioned earlier in this chapter, is the mental barrier that many PDE officials develop in relation to cooperating with officials from the NDOE and the TSC. That is, many PDE officials regard themselves as provincial employees and therefore do not think they are obliged to provide information to the national bodies. Furthermore, communication takes longer because of the many links in the channel. The First Assistant Secretary for Finance and Administration elaborated upon these problems. In his words:

> One of the criticisms that our administration heard was that lines of communication between the Provincial Assistant Secretaries of Education and the National Department of Education were not clear cut because the National Secretary of Education had to go through the Secretary of the Provincial Department in order to get down to the Provincial Assistant Secretary of Education. This is a clear disadvantage because the National Secretary of Education does not have the powers of direct control to see that things are implemented straight away. (ND-07)

This official insisted that making the Provincial Assistant Secretaries of Education responsible to the National Secretary of Education would be a clear advantage. He continued:

> Now, with the proposed new system, it is envisaged that some of the positions in the provinces would become part of the National Department establishment so that their day-to-day operations would come directly under the National Secretary. That way, there would be an advantage. The National Secretary could give them instructions straight away, and they would carry out whatever actions he requests of them. (ND-07)

An Inspector with the Teaching Service Commission was of the opinion that "the new reforms to the Provincial Government system would help minimize the selection of unqualified Provincial Assistant Secretaries of Education" (TS-04). He added that under a single-line department the National Secretary of Education "would appoint people who are suitably qualified for those jobs" (TS-04).

Another reason that interorganizational linkages with the PDEs were perceived to be ineffective is that many Provincial Assistant Secretaries of Education were seen to lack the capacity to perform the functions of that office. The participants suggested that because the provincial authorities made these appointments, there were situations when unqualified people were appointed to these positions. To avoid nepotism and promote appointment on merit, the National Secretary of Education should appoint the Provincial Assistant Secretaries of Education. In the words of the Assistant Secretary for Policy, Planning, and Evaluation:

> Nepotism in the sense of provincial authorities appointing persons who are not qualified to these key positions exists in some provinces. I think if the National Secretary of Education is given the legal authority to hire and fire Provincial Assistant Secretaries of Education, the nepotism being practiced at the moment can be avoided. The National Secretary of Education would select suitable persons on a merit basis. (ND-01)

The participants seemed to argue that if qualified people were appointed as Provincial Assistant Secretaries of Education by the National Secretary of Education, they would be able to carry out the tasks of that office more effectively, consequently improving the degree and the intensity of interaction among the PDEs and the two national organizations.

Capacity Building

One of the problems that seems to be pervasive in the whole civil service in PNG is the shortage of persons possessing relevant technical skills to meet the ever-growing demands on government services by the people. The education system also suffers from this shortage. In chapter 6, capacity building was described in terms of increasing technical capacity, self-confidence, and initiative among the existing operators, and recruiting more people to the PDEs. The discussion of capacity building in this section is focused on improving educational planning and research capacities as well as human-relations skills of the operators in the PDEs.

As highlighted in chapter 6, it seems that the need for improving planning capacities has been identified as most acute in the provinces. Many provincial educational planners and Provincial Assistant Secretaries of Education are perceived not to possess educational planning skills. Consequently, provincial educational plans are not well thought out and therefore do not meet the needs of the provinces. This conclusion was based on the comments made by PDE participants and the evidence derived from the analysis of the minutes of the Senior Education Officer' Conference. According to these minutes, it is doubtful whether there is the expertise in many provinces to take on the daunting task of preparing a 10-year education plan. The minutes continued:

> An education plan is difficult enough to complete under normal circumstances but in a system that is both expanding and restructuring, the job is a mammoth one. It will

> be a full time job for a lengthy period of time for a planner to prepare an education plan. They should be given all the support that they require without being redirected towards other tasks. (Department of Education, 1995, p. 41)

This contention is also supported by the statement made by one Assistant Secretary in the NDOE. In his words:

> The provincial planners and their superiors lack intellectual abilities to satisfactorily carry out their functions. Lack of planning skills is one major area of weakness. They need skills in collecting the required information, organizing and analyzing the data, and working out the targets to be achieved. . . . People at the provincial level also need to acquire, through some training strategy, writing skills to communicate precisely what they want and how they want to achieve it. (ND-01)

The lack of human resource skills, especially in the field of planning and the management capacity of education managers, is also acknowledged in the National Education Plan for the period 1994-2010. Consequently, it was listed as one of the 10 critical research areas (Department of Education, 1994).

Another task area in which the education system has experienced capacity problems involves research and evaluation. According to the First Assistant Secretary for Finance and Administration, the research capacity of the education system needs to be improved in order to help avoid past mistakes and at the same time improve the capacities of senior officials to react more quickly to policy changes. He emphasized that a periodical review of educational structures is necessary to pinpoint the weaknesses of the system and make changes in order to avoid conflicts. He elaborated:

> One of . . . [my suggestions] is that we should have periodic reviews, say every five years, of the role of each organization. The reviews should also focus on the existing laws governing these educational authorities and the policies and programs we have in place. That should assist us to avoid conflicts. In other words, we have not been very proactive; we have been reacting to problems instead. Constant and timely reviews would assist us to solve a lot of conflicts before they even arise. (ND-07)

The same person agreed that many education officials need training to improve their skills to cope with the constant policy changes. The reason, he argued, is that policy changes occur frequently, and the operators must cope with these changes. He explained:

> I will just give you some general ideas on administration. One of the urgent needs is that a lot of our top managers and middle managers must receive capacity building in a range of skills. They need intellectual skills, technical skills, and understanding of how to interpret government policies and translate them into

> implementation schedules or programs. We constantly have changes in policy directives. Thus, our people in administration need to develop skills in making changes when directions and policies are changed. They need to have skills to change from one mode of behavior to another. Also, the education programs are getting bigger and bigger each year. We need to have managers who are trained with the right skills and know-how to maneuver quickly between the times, foresee problems, and frame solutions so we can minimize possible problems and conflicts. (ND-07)

Another skill in which training ought to be focused is human relations. In the words of the Deputy Secretary of Education for Administration, "Because management is relationship, and organizations are living organizations, on-the-job training could be focused on human relationships" (ND-12). The argument here is that rather than focusing training purely on technical skills, human-relations skills of the operators need to be improved in order to facilitate greater interaction among the members of these organizations.

In this section, capacity building was detailed. Three specific skill areas -- educational planning, research and evaluation, and human-relations skills -- were identified as lacking in the education system. The participants suggested that improvements in these skill areas would add to the effectiveness of the education system in the provision of provincial high school education.

Summary

In this part improvements suggested by the participants were discussed. These include the call for increased consultation and dialogue between and among the two national organizations and the PDEs through several means, such as representation on policy-making bodies and increased personnel visits to the PDEs to facilitate better dialogue and communication. The participants also suggested setting up regional TSC offices to improve access by teachers. Another suggestion for improvement concerned the call for Provincial Assistant Secretaries of Education to be appointed by the National Secretary of Education. The participants argued that if the Provincial Assistant Secretaries of Education were appointed by the National Education Secretary, direct linkage would result and hence improve national policy implementation. Finally, the participants called for improvements in the education system with regard to planning, research, and human-relations skills. In the next part the chapter findings are detailed.

Chapter Findings

The purpose of this chapter is to determine the effectiveness of interorganizational linkages between and among the NDOE, the TSC, and PDEs, and to suggest ways to improve the interorganizational relationships between and among these organizations. This part summarizes the findings of this chapter under three main headings: Delimited Functions and Problems of Cooperation and Coordination, Effectiveness of the Linkages, and Suggested Improvements.

Delimited Functions and Problems of Cooperation and Coordination

As mentioned in chapters 5 and 6, the delegation of roles and functions, under the provisions of both the Education Act and the Teaching Service Act, gave delimited powers to each of the organizations. Consequently, coordination and cooperation are necessary to implement the provincial high school policies. From time to time cooperation and coordination have been difficult because of the different political authorities to whom the civil servants report. The PDEs are answerable to the Provincial Governments, whereas the NDOE and the TSC are responsible to the National Governments. Several participants reported that this structure tended to create a division among the national and provincial officials. Furthermore, a Provincial Government, under the provisions of the Organic Law on Provincial Government of 1977, has the powers to make its own developmental priorities, including educational policies. Consequently, policy clashes have been experienced, resulting in some provinces not implementing national education policies.

Effectiveness of the Linkages

The findings relating to the effectiveness of the interorganizational linkages are summarized in three sections: Extent of Effectiveness, Factors Promoting Effectiveness, and Factors Inhibiting Effectiveness.

Extent of effectiveness. The perception of the effectiveness of the interorganizational linkages between and among the NDOE, the TSC, and the PDEs differed greatly among the participants. The extent of effectiveness was rated as *just satisfactory* to *very effective*. The participants from the NDOE and the TSC said that the relationship between the two organizations is effective to the extent that it is an ongoing, daily activity. The effectiveness of the linkages between the NDOE and the PDEs, on the other hand, depends on the persons involved in interorganizational activities. Some -- for example, the Deputy Secretary of Education for Standards -- described the relationships as *just satisfactory*. The relationships were satisfactory as long as the operators from the various organizations remained within the bounds of their roles. Other participants, such as the National Secretary of Education, rated the linkages between the NDOE and the PDEs as open and harmonious. Taken together, the effectiveness of the interorganizational linkages between the NDOE and individual PDEs depends a great deal on "good will" on the part of the operators.

The relationship between the TSC and PDEs seems somewhat strained. Too often, it seems, the officials from the PDEs did not agree with the decisions of the TSC with regard to teacher appointment and teacher discipline, and consequently these provincial officials became reluctant to adhere to the directions issued by the TSC. It is evident from the analysis of the data that communication between the TSC and individual PDEs often takes place under duress. The TSC depends a great deal on its legal powers to enforce the implementation of its decisions. It is possible that the PDE resistance to directions issued by the TSC was caused by the latter's dependence on the legal powers it has in matters relating to teachers.

Factors promoting effectiveness. Several factors were identified as contributing to the effectiveness of the interorganizational linkages. First is the common goal that these organizations aim to accomplish. That is, the NDOE, the TSC and the PDEs are interested in providing education to the children of PNG. Sharing a common goal helps to reduce conflicts among them. The effective relationship between the TSC and the NDOE was seen as a factor of the proximity of the two organizations, which are housed in the same building in Port Moresby, and therefore interorganizational interaction takes place a great deal on a face-to-face basis. The regular interaction among the participants promotes informal, nonformal, and formal relationships.

A third factor promoting the effectiveness of the interorganizational linkages is the quality of leadership provided, in particular, by the heads of the TSC and the NDOE. The openness and personality of the leaders in these two organizations were seen to be conducive to effective interorganizational relationships. Familiarity with the provisions of the education laws was also identified as another factor promoting effectiveness. Most Provincial Assistant Secretaries of Education know the provisions of these laws and, consequently, the provincial functions. This knowledge allows the operators to function within their delegated areas, which helped reduced friction and conflicts.

As mentioned in chapter 5, the Senior Education Officers' Conference was singled out unanimously as the most useful structure for interorganizational communication and cooperation. This conference provides a forum and a venue for interorganizational exchange of information and resolution of conflicts. The leadership provided by the National Secretary of Education at these conferences promotes a harmonious atmosphere for the discussion of policy and policy implementation.

The last factor identified is the number of education boards involved in educational decision making. The wide representation allowed on some of these boards was seen as promoting effective interaction through broad representation, that leads to quality decision making.

Factors inhibiting effectiveness. Though the interorganizational linkages were seen to be satisfactory, they could be more improved if the education system in which these two level of organizations operate were more attuned to change. Like any other bureaucratic organization, the system grinds slowly and does not react quickly to changes that are taking place all the time. The interorganizational linkages are also affected by the quality of communication and dialogue between and among the operators. Oftentimes, there is inconsistency in the communication and dialogue, which prevents smooth flow of resources and information. The lack of consistent information from the PDEs to the NDOE was perceived to contribute to poor educational planning.

In summary, the effectiveness of the interorganizational linkages is affected by the nature of the devolution of educational authority from the 2 national to the 20 provincial organizations. The delimited roles in the provision of provincial high school education has sometimes resulted in strained relationships. By and large, the relationships are satisfactory. Several factors, such as the Senior Education Officers' Conference, were identified as contributing to the effectiveness of the linkages. The participants also identified factors such as the inconsistent flow of information and the system's inability to change quickly as negatively affecting the interorganizational linkages. In the next section participants' suggestions for improvement are identified.

Suggested Improvements

Several suggestions were made by the participants to improve the relationships among these organizations. Increased consultation and dialogue were seen as important in improving the linkages among the participating organizations. The participants called for increased visits to the provinces by officials from the NDOE and the TSC. The resulting face-to-face interaction would enable operators to discuss and resolve problems much more readily before they could escalate. Another suggestion made was to regionalize the TSC office to improve access by teachers and PDE officials. Currently, the TSC office is located only in Port Moresby, the nation's capital. Communication between the nation's capital and the provinces can be very difficult at times. It is even more difficult for individual teachers in the provinces, outside of Port Moresby, to access the TSC office easily. Thus, if the TSC had offices at either the regional level or provincial level, access would be greatly improved. Finally, analysis of the study findings seems to indicate that research and planning capacities as well as human-relations skills need improving. The education system, like the rest of the civil service system, seems to lack the technical skills necessary to carry out these functions. Inservice training and education were seen as means by which the operators could acquire these skills.

In summary, the participants were of the opinion that interorganizational linkages among these organizations would be improved through greater face-to-face interaction and the establishment of TSC offices in the regions. Improvement in technical and human-relations skills would also allow the operators to perform their tasks more effectively and efficiently.

In the next chapter the findings from this research are discussed using the literature pertaining to interorganizational linkages.

CHAPTER 9

DISCUSSION OF THE FINDINGS

In chapters 4 to 8 the results of the study were presented. In this chapter these findings are discussed in the light of the literature pertaining to interorganizational linkages and the researcher's own experience of having served within the system for over 20 years. The results of the study are examined under each of the chapter headings: Interorganizational Contexts, Interorganizational Structures, Resource and Information Linkages, Conflict and Conflict Resolution, and Effectiveness of the Interorganizational Linkages.

Interorganizational Contexts

The literature identified five factors pertaining to the emergence of interorganizational relationships. Interorganizational linkages are means by which organizations are able to acquire important resources (Evans & Boyd, 1991). They are formed to gain control over uncertain environmental conditions (Daft, 1989; Whetten, 1981) or to take advantage of opportunities in the environment (Van de Ven & Ferry, 1980). These relationships enable the members of the network or interorganizational set to use resources more effectively (Witkins, 1979). Interorganizational linkages also arise in response to external influences in the form of a mandate (Van de Ven & Ferry, 1980). This mandate forces organizations with similar interests to work together. Finally, interorganizational linkages occur for the purpose of organizations gaining power and control (Morgan, 1986). By entering into interorganizational relationships, the interacting organizations seek to monitor and control boundary transactions. In the process, the people in the organizations may build up considerable power to take control of information and decision making.

A careful analysis of the organizations studied by these authors revealed that in all cases the organizations were already in existence as independent identities before participating in interorganizational activities. From this perspective, the organizations could be said to be acting "inside out." Each of these organizations has a choice to participate or not to participate in interorganizational relationships. Thus, their participation in interorganizational linkages is voluntary. The Papua New Guinea (PNG) experience, as described in this study, is a result of the Education Act of 1970 and the Teaching Service Act of 1971. The Education Act decentralized some of the administrative and decision-making powers to district and school levels. The Teaching Service Act deconcentrated power over the management of teachers by creating a Teaching Service Commission (TSC) to administer the terms and conditions of service of teachers. Prior to these education laws being enacted, the provision of education was a shared responsibility of the National Department of Education (NDOE) and the various churches. The NDOE and the churches, however, worked independently of each other. The government had limited influence through special grants-in-aid on the educational activities of the churches. There was no TSC; nor were there District Education Boards. These latter organizations were created as a result of the enactment of the two pieces of legislation mentioned. Thus, the experience reported in this study is the opposite of the contexts identified in the literature in that interorganizational linkages were legislated prior to the establishment of some of the participating organizations.

Despite this difference, the interorganizational linkages between and among the NDOE, the TSC, and the PDEs reflect some of the findings in the literature. Decentralizing some of the educational powers to district and local levels in PNG permitted the National Government to require resource and monetary contributions to education from the community and education agencies such as the churches. A scrutiny of the relevant pieces of educational legislation revealed that resource contribution by the churches and the community were made explicit. From this perspective, it could be argued that the National Government perceived the passage of the 1970 Education Act as a means of acquiring important resources along the line that Evan and Boyd (1991) suggested. Later on, as Provincial Governments came into being, and with the subsequent enactment of the Education Act of 1983 and the Teaching Service Act of 1988, the division of functions, and hence the establishment of interorganizational linkages, were seen as a solution to quell aspirations for political independence by some of the provinces. From this point of view, the PNG experience could be perceived as the National Government taking advantage of the opportunities in the environment in the way described by Van de Ven and Ferry (1980).

The creation of the Teaching Service Commission freed the NDOE from dealing with industrial matters pertaining to teachers' terms and conditions of service. Consequently, it allowed the NDOE to concentrate on the professional aspects of education. In practice, the TSC decided the terms and conditions of service of teachers. The NDOE, on the other hand, inspected and evaluated the professional performance of teachers in the implementation of the relevant curriculum. The PDEs, for their part, made decisions relating to the appointment of teachers to provincial high schools. This and other forms of power sharing explained in the preceding data chapters seem to suggest an example in which a large organization can be split up into several smaller units that operate autonomously. These new identities, however, must maintain interorganizational linkages because, on their own, none of the organizations can carry out its obligations fully. Similarly, neither does the completion by one organization of its responsibilities without the others doing the same ensure that the goals of the educational system are achieved. The careful delimitation of power to different organizations over a certain function had fostered interdependence among the NDOE, the TSC, and the PDEs. Because "different officials and different bodies . . . [were] each given carefully delimited powers over a particular element of a particular function" (Songo, 1978, p. 277), interdependence became an integral part of the interaction between and among these organizations in order to carry out their functions and associated tasks. The spirit of the Education Act was sharing power rather than acquiring absolute power. From this perspective, the interorganizational linkages between and among the NDOE, the TSC, and the PDEs are a classical example of the systems theory in Parsons and Shils' (1962) definition. In their view:

> The most general and fundamental property of a system is the interdependence of parts and variables. Interdependence consists of the existence of determinate relationships among the parts or variables as contrasted with randomness of variability. In other words, interdependence is *order* in the relationship among the components that enter into a system. (p. 107)

In a similar vein, Morgan, (1986) proposed that "organizations, like organisms, are 'open' to their environment and must achieve an appropriate relation with that environment if they are to survive" (pp. 44-45). He added that at a pragmatic level, the open-systems approach usually focused on a number of key issues. One of these is that "the open-systems approach defines an organization in terms of interrelated subsystems. Systems are like Chinese boxes in that they always contain wholes within wholes" (p. 45). With the delimitation of roles and functions, operational procedures were established to promote interorganizational linkages among the participating organizations. Thus, dependence was ordered and not random.

Boundary Spanning

In order to facilitate interorganizational linkages, the member organizations established boundary-spanning units that dealt with "the environments, and control the boundaries of an organization" (Das, 1990, p. 22). From a review of the literature, Putnam, Phillips, and Chapman (1996) noted that these boundary-spanning units usually consist of interlocking boards of directors, interaction among personnel, and exchange of personnel (p. 283). Taken together, people serving in boundary-spanning units are known as *boundary spanners*. In this study boundary spanners were those officials in the organizations whose day-to-day responsibilities required them to deal with the external environment of their particular organization.

The study revealed that only the NDOE set up two boundary-spanning units called the School Administration and Liaison Division (SALD) and the Division of Policy, Planning, and Evaluation. The boundary spanning functions of the SALD were limited to liaison with the TSC and the PDEs in matters relating to teachers and the curriculum. The Division of Policy, Planning, and Evaluation, on the other hand, was responsible for boundary-spanning functions related to educational planning. The Teaching Service Commission also has an ad hoc boundary-spanning unit called the Central Sorting Unit, that coordinates the annual teacher appointment decisions. The PNG experience demonstrates that boundary spanning was promoted through interaction among officials and the sharing of personnel and administrative facilities.

It is common under bureaucratic procedures for interorganizational communication to be directed through the heads of the respective organizations. In this study it was not always the case for interorganizational interactions between and among the NDOE, the TSC, and the PDEs. Boundary spanning took place among these organizations at two levels: policy and operational. At the policy level boundary spanning occurred among the organizations through the heads of the respective departments. Any policy matters originating from within one organization were channeled to the other organizations via the respective head. One difference in the interpretation of "Who is the head?" is that the TSC did not have any direct relationship with the Provincial Department Secretary. For the TSC the head was the person who assumed the chairpersonship of the PEB. In most cases this person was the Provincial Assistant Secretary of Education.

In general, at the operational level boundary spanning between and among these organizations took place at various levels between the operators. In this case the bureaucratic requirement were not necessarily adhered to. By and large, most of the boundary activities among these organizations took place at the Assistant Secretary or equivalent level.

The Senior Education Officers' Conference appeared to be the interlocking meeting at which the participating organizations exchanged and discussed common problems associated with the operation of provincial high schools. This face-to-face interaction was seen by the PDEs as most useful for influencing the National Education Policies. The NDOE and the TSC, on the other hand, gained first-hand feedback from the Provincial Assistant Secretaries of Education on educational policy implementation issues and problems.

Several factors contributed to nonadherence to strictly bureaucratic structures of communication. First, the Provincial Departments consisted of several divisions, each having a different function (see Figure 1.3). It would therefore be almost impossible for the Provincial Department Secretary to demand that the PDE adhere to the strictly bureaucratic channels of communication with respect to interorganizational linkages with the NDOE and the TSC. A second explanation was that, as mentioned in chapters 4 and 5, the great majority of the participants in this study assumed their current positions from the teaching ranks. During their tenure as teachers they became familiar with each other, and the informal and nonformal relationships resulting from their previous interactions probably facilitated their communicating directly with one another. A third reason, from the NDOE's perspective, was that it had separate divisions dealing with different responsibilities and functions. For example, individuals from the Division of Policy, Planning, and Evaluation interacted directly with those from the PDEs and the TSC in matters relating to planning for the establishment and staffing of new provincial high schools. Personnel from each division had the authority to communicate directly with the relevant person(s) in the TSC or the PDEs.

These data underscored the critical role played by the Provincial Assistant Secretary of Education in affecting interorganizational relationships. Although boundary spanning matters could be directed from the PDEs to the NDOE and the TSC through several entry points, thereby providing an opportunity for some response, boundary-spanning inquiries from the NDOE and the TSC to the PDEs could be directed only through the Provincial Assistant Secretaries of Education. If the Provincial Assistant Secretary decided not to cooperate, neither the NDOE nor the TSC could do very much other than wait. The incumbents of these positions, therefore, have the power to thwart or facilitate interorganizational linkages.

Domain Consensus-Dissensus

Generally speaking, the roles and functions of each of the organizations were firmly established and respected by each of these organizations. More especially, there was agreement that provincial high school curriculum should remain the function of the NDOE and that the responsibility for determining the terms and conditions of service for members of the Teaching Service should remain in the hands of the TSC. Though the status quo continued, what seemed to evolve was that for a number of functions the provinces, through the PDEs, took on some of the responsibilities of the NDOE. In the last couple of years the PDEs took partial responsibility for providing resource support to the Secondary Inspectors to fulfill their obligations of visiting and carrying out inspection functions. The PDEs also provided resources for the inservice training of teachers. The participation by the PDEs in these roles was welcomed by the NDOE. Although some Provincial Assistant Secretaries of Education indicated that they would like to assume these responsibilities fully, they did not have the capacity to do so. Furthermore, maintenance of national standards was of great importance to most of the senior officials, and therefore there was unlikely to be any further transfer of the curriculum or related functions from the National to the Provincial Governments.

Disagreements in relation to the roles and functions of these organizations occurred predominantly in the way some of these tasks were performed. Some of the areas identified earlier in chapters 7 and 8 included the way the disciplinary function was carried out by the Inspectors for the TSC. The criticism was that when the documents detailing charges of misconduct were sent to the TSC by the PDEs, the TSC was too slow in responding to these charges. Scrutiny of the minutes of one Provincial Education Board (PEB) meetings revealed that not only did it take a long time for the TSC response to reach the PEBs, but there was also disagreement in relation to the methods of laying formal charges against teachers. Another function that also led to disagreement over the way it was performed was the process of making teacher appointments with tenure to provincial high school positions advertised in the *National Education Gazette*. The PDEs complained that the results published by the TSC were very different from what they had originally submitted. On the other hand, the TSC claimed that the PDEs applied unjustifiable reasons for not appointing teachers to certain positions, therefore necessitating the TSC involvement and change.

There were disagreements between the NDOE and the PDEs in relation to the implementation of national educational policies. One such disagreement related to the new educational policy targeting the restructuring of the provincial and primary schools to make room for more students in Grades 11 and 12. Although both organizations agreed to the introduction of the new policy, disagreements occurred in relation to the speed with which the reforms should be implemented and the source of the funding. The provinces wanted the policy to be implemented at a much faster rate than the NDOE had planned. They also wanted the NDOE to meet the resource requirements for these policies.

Disagreement between the NDOE and the PDEs also occurred in relation to the Free Education Policy. Under this policy the National Minister for Education wanted to centralize the functions of procurement and distribution of school materials. The PDEs objected to this and argued that they were in a better position to know what their real needs were and to spend the financial allocations accordingly.

These findings raise the issue of meaningful participation by major stakeholders in a task where participation has been delimited by law. When the provision of secondary education is a shared function, how should a National Government go about obtaining mutual cooperation from the provinces to implement nationally decided educational policies? Stakeholders perceive differently how change in education should be brought about. If public support, including that of other organizations involved in like activities, is to be won over, Cibulka (1991) warned that, among other conditions, the new policy must be favorable and accommodate local initiative. Thus, in this situation it is even more important that the NDOE and the TSC, as national organizations, take into account the possible difficulties and weaknesses that exist in different provinces. The operators in the NDOE and the TSC need to ask themselves, "Is it important to insist on parallel educational development in all Provinces? Should those provinces that have education as their development priority be held back to allow others that did not have educational development as a priority to catch up?"

Educational development, whether in a centrally controlled situation or a decentralized administration, will continue to be uneven in any country, for there are factors such as differences in perception within the population of the importance of education for their personal development. Similarly, differences in leadership and in the local resources available have an impact on educational development. Thus, under the existing structure the National Government's roles should be targeted at providing leadership and resource support in educationally weaker provinces, while allowing the educationally advanced provinces to continue with their progress unhindered.

The above discussion suggests that the legal boundaries of responsibilities in a mandated situation are insufficient, on their own, to guarantee mutual cooperative interaction. Cooperative and collaborative efforts have to be nurtured to bring about effective interorganizational linkages.

Interorganizational Structures

According to Van de Ven and Ferry (1980), "Structure refers to the administrative arrangements that are established to define the role relationships among members" (p. 301). As stated in chapter 7, the need for interorganizational linkages was a result of enacted laws. Consequently, the structure under which the participating organizations interacted was mandated. In order to facilitate readability, the important structural variables highlighted in the study -- formalization, mandatedness, intensity, centralization, and complexity -- are defined.

Formalization is "the extent to which each member organization has officially sanctioned its participation in the interorganizational relationship" (Intriligator, 1992, p. 10). Analysis of formalization is focused upon the degree to which interdependency is given official sanction by the parties involved, the extent to which a coordination mechanism exists between the organizations (Marrett, 1971), the extent to which rules and policies are established to govern transactions between organizations, and the number of procedures followed by committees or groups that govern the network (Van de Ven & Ferry, 1980).

Mandatedness refers to the extent to which relationships are governed by laws or regulations. These laws or regulations, according to Hall (1996), are imposed on the relationship by legislative or administrative rulings.

Marrett (1971) described *intensity* as an indication of the degree of activity in the interorganizational network. This involves the frequency of activity and the amount of resources consumed by the activity. *Centralization* refers to the centrality of the decision making and centrality of information and resource flows. Centrality of decision making refers to the locus of authority in the network, whereas the centrality of networks refers to the pattern of connections between agencies in terms of information and resource flows (Van de Ven & Ferry, 1980). *Complexity*, on the other hand, refers to the number of links in the interorganizational relationship. What follows in the next section is a discussion of how these interorganizational linkage properties are reflected in the interorganizational interaction between and among the NDOE, the TSC, and the PDEs in the operation of provincial high schools.

Formal, Mandated, and Operational Linkages

This study involved the analysis of interorganizational linkages in an organizational network within a legal framework. It has been demonstrated that the roles and functions of each of the member organizations were tightly regulated under the provisions of both the Education Act of 1983 and the Teaching Service Act of 1988. The delimitation of responsibility to each of these organizations meant that operational structures had to be established to harmonize their respective activities. The analysis of the interview data shows that standard operational structures were established for every major aspect of the interorganizational relationship. These included processes relating to the preservice and inservice training of teachers; advertisement, recruitment, and appointment of teachers to vacant positions; reporting on the operation of provincial high schools; evaluation of the work of teachers; and exchange of information. These operational procedures were highly standardized, and, in general, interorganizational linkages were maintained with great intensity.

According to Intriligator (1992),

> Interagency planning and action require the creation of administrative structures to oversee and maintain the interagency effort.... Typically, an interagency

> committee is used for this purpose, sometimes accompanied by creation of a new administrative unit that functions as the operational arm of the interagency effort. (p. 9)

The data from this study do not conform with Intriligator's summation. There was no overarching unit charged with the responsibility for coordinating the activities of the member organizations. With respect to functions for which concurrent responsibility existed, the NDOE and the TSC established coordinating units within their organizations to harmonize the educational activities. For example, the NDOE established the SALD to monitor the activities of the PDEs and provide for liaison with them. The TSC instituted the Central Sorting Unit to ensure that teacher appointment decisions of one province did not clash with another. But in general, because of the greater responsibility it was granted under the provisions of the educational laws, and coupled with the strategic power it had to influence greatly the operation of provincial high schools, the NDOE appeared to be the dominant organization in this interorganizational network.

The study seems to reflect that there was insufficient organization to ensure that decision making was carried out under the provisions of the Education and the Teaching Service Acts and to provide some guarantee that these decisions were implemented. Several examples of insufficient organization are identified elsewhere in this chapter. The comment by one high ranking official of the NDOE is a reflection of the state of affairs. He pointed out that although national policies were formulated in Port Moresby, there was nothing under the provisions of the Education Act of 1983 to make the provinces implement those national decisions.

Though in most cases the procedures set out to operationalize functions pertaining to the operation of provincial high schools were successful to the extent that all the organizations respected them, there were occasions when role conflicts occurred between and among the participating organizations. In these cases demarcation of roles and functions, though appearing to be clearly stated, was difficult to determine. On other occasions the perception of the roles to be played by each organization, especially the TSC and the PDEs, differed, consequently creating conflict.

As mentioned earlier in this chapter, the Education Act of 1970 and the Teaching Service Act of 1971, and later the Education Act of 1983 and the Teaching Service Act of 1988, effectively took away some of the NDOE's responsibilities and delegated them to either the PEBs or the TSC. But because of insufficient structure and the critical role it assumes in the teaching and learning process, the NDOE emerged as the dominant member of the organization network. The PNG experience suggests that in a tightly mandated interorganizational relationship, a dominant organization can arise to fill the gaps and act as the overarching leader when the mandated relationships fail to function effectively.

The advertisement, recruitment, and appointment of teachers to positions in provincial high schools was a function in which all of the organizations played a part. It was one function in which major operational problems were reported, especially between the TSC and the PDEs. There was ambiguity in the provisions of the Education Act of 1983 and the Teaching Service Act of 1988. The ambiguity was played out when the PEBs' appointment decisions were rejected or changed by the TSC. This experience required reexamination and redefinition of the roles and functions of each of these organizations with respect to the appointment of teachers to positions with tenure. These should be clearly stated to avoid confusion and delay. Alternatively, the process of teachers applying for advertised vacancies should be reassessed. One aspect of the process that may need reevaluating is the teachers' preference list. This is a standard form in which the teachers identify, in preferential order, all the positions for which they apply. The preference list is sent to the Central Sorting Unit of the TSC. It is not made available to the PEBs, the PEBs receive only applications from teachers. For each position for which a teacher applies, he/she must indicate the preference order that is given to that position. Several Provincial Assistant Secretaries of Education proposed that if the PEBs also received the full information contained in the preference list, the PEBs might be more thorough in the process of making teacher appointment decisions.

Informal and Nonformal Linkages

Morgan (1986) proposed the concept of organizations as *sociotechnical systems*. He postulated that viewing organizations as sociotechnical systems "captures the interdependent qualities of the social and technical aspects of work" (p. 42). In describing this concept, Roberts and Grabowski (1996) contended that viewing organizations as sociotechnical systems allows us to "focus on how humans forge and maintain communication, thus, enacting structure. . . [whereas viewing organizations as social systems] emphasizes the roles of symbols, their meanings, and their transition through the social system" (p. 416). This view suggests that "formal and emergent networks coexist, and each can be best understood in the context of the other" (Monge & Eisenberg, 1987, p. 309). That is, social interaction through informal and nonformal linkages is important because they affect the work of the organizations positively.

In the PNG context both informal and nonformal linkages, as described by Sayles (1961), were present, as evidenced in the responses of the participants. Informal and nonformal linkages were identified as contributing to the effectiveness of the interaction between and among the operators in the member organizations. Informal linkages were identified in terms of after-hours activities of the participants. The participants established informal relationships through being members of Boards of Governors or the Boards of Management of the schools their children attended, as well as being members of the Parents' and Citizens' Associations of those schools. For some participants, informal relationships were established with colleagues who were also members of the same church organizations. All of these relationships were seen to promote nonformal linkages between and among the operators. For example, several participants said that knowing a person in these various capacities made it possible for them to interact with that person in a more relaxed atmosphere than they did with others whom they did not know well outside the work place. Nonformal relationships were promoted mostly through greater understanding of the reasons for interaction between and among the participating organizations. The most significant factor identified by the participants as contributing to shared attitudes and values that facilitated nonformal linkages was the teaching experience of the great majority of the operators. Most participants commented that because most of them reached their current positions through the ranks of teachers, this common bond harmonized their cooperation and interaction.

Putnam, Phillips, and Chapman (1996), from the perspective of the linkage metaphor, postulated:

> Organizations consist of multiple, overlapping networks with permeable boundaries. Members are interlocked in a variety of relationships that "transcend office walls" through community projects, childcare concerns, informal friendships, neighbourhood activities, and company socials. . . . Connections among people imply collaboration and interdependence; linkages promote coordinated action and extend webs of social influence. Since communication alters network patterns, linkages shift with issues, topics, and contexts. Thus, network roles and patterns are fluid and dynamic. Treating organizations as networks challenges traditional notions of static boundaries, unidimensional functions, and immobile structures (p. 384).

The findings of this research also highlight the importance of informal and nonformal relationships in enhancing formal linkages. One important impact of nonformal relationships is that operators are able to discuss issues with officials from the other organizations "on an informal basis" before applying the official bureaucratic apparatus to formalize decisions. This kind of interaction, in the researcher's view, is typified by the "good will" that exist between the Provincial Assistant Secretaries of Education and the

NDOE. The words of one senior official of the NDOE are restated to demonstrate this point. He said:

> There is a great deal of good will between us and the Provincial Assistant Secretaries of Education of the PDEs. Because most of these Provincial Assistant Secretaries of Education are former teachers, even though they are working for the Provincial Departments, they still regard themselves as part and parcel of the whole education system. (ND-02)

In interorganizational linkages relationships are not static. Thus structure alone, as developed further in this chapter, does not guarantee cooperation and collaboration. Collaborative and transformational leadership is necessary to promote "good will," cooperation, and coordination.

Voluntary Interorganizational Structures

As well as the presence of informal linkages, this study also discovered the existence of what the researcher labeled *voluntary interorganizational structures*. Voluntary interorganizational structures are those structural arrangements in which participation is voluntary. Thus, they are a special type of nonformal linkages. Two useful voluntary structures were identified: the Senior Education Officers' Conference and the Ratings Conference. The interaction in these conferences was observed to be intense and constructive. Of the two, the Senior Education Officers' Conference seemed to be more influential. The outcomes of these conferences significantly influenced educational policy formulation and implementation. Furthermore, a great deal of cooperation and interdependency was demonstrated during the meetings. The Senior Education Officers' Conference, in particular, contributed to the cohesiveness of the education system. Issues pertaining to the operation of provincial high schools were discussed thoroughly. Decisions were reached through consensus or by majority vote. The researcher also noted in the two meetings he observed that attendance by the Provincial Assistant Secretaries of Education was good. The cooperation and participation demonstrated in these meetings was well reflected in the statement made by the then-Acting Secretary of Education at the opening of the 1995 Ratings Conference: "Together we have come this far, and together we will go further" (Baki, 1995, p. 1).

Although the Senior Education Officers' Conference was revered by all the participants, several pointed out that decisions made at these conferences were not always implemented. (The reader is reminded that this conference is an NDOE creation, and there was no independent unit established within the NDOE to ensure that the conference decisions were implemented.) The Policy and Evaluation Unit within the Division of Policy, Planning, and Evaluation provided secretarial services to the meetings.

This state of affairs also confirms the earlier conclusion that there is insufficient organization to ensure that nationally determined policies are implemented in all provinces. Because the Senior Education Officers' Conference is perceived to contribute to effective interorganizational linkages, it might be worthwhile to set up a unit within the NDOE whose task would be to coordinate and supervise the implementation of the decisions made at these meetings. Further, the frequency of the Senior Education Officers' Conference should be increased to provide greater opportunities for problem solving and evaluation of educational policy implementation, especially now that the country is implementing the secondary education expansion plan.

Resource and Information Linkages

The discussion in this part of the chapter is focused on identifying the resources and information that are exchanged between and among the participating organizations, on the frequency, and on the direction in that these resources and information flow. The findings are discussed separately under resource flows and information flows.

Resource Flows

Resource flows are "units of value that are transacted between organizations" (Van de Ven & Ferry, 1980, p. 301). In this study resource flows were identified in terms of human and physical resources. By and large, human resources flowed from the NDOE to the PDEs. Because the PDEs were perceived to lack the human-resource capacity to perform some of their functions independently, they depended on the expertise of the NDOE and the TSC to assist them. In particular, the PDEs depended on the technical expertise of the NDOE to help them draw up their education plans and education acts. They also received technical advice on how to process the resumption of duty forms.

In terms of physical resources there was little resource sharing among these organizations. In the final analysis they all depended on the National Government budget for funding. Generally, none of these organizations receive anywhere near sufficient funding to carry out their functions fully. This necessitates dependence on one another for certain functions to be accomplished. The Secondary Inspectors, who are based in the provinces, for example, receive some resource assistance from the PDEs. In recent years they have depended on the PDEs for some financial and transport assistance to enable them to carry out inspection visits. These needs are most acute either at the beginning of the year when the Division of Inspections and Guidance awaits its allocations from the NDOE, or at the end of the year when the Inspectors have exhausted the funds they have been allocated.

The frequency of human-resource sharing between the NDOE and the TSC is constant because both organizations are housed in the same building. Human-resource flows from the NDOE and the TSC to the PDEs and vice versa are greatly affected by the availability of finance to the NDOE and the TSC. Although these organizations recognize the need for more frequent presence the national officials in the provinces, they can provide their expertise only as the availability of funds dictates. Similarly, the NDOE cannot bring Provincial Assistant Secretaries of Education from the provinces to attend NDOE committee meetings. For example, the Inspections Review Committee Report by the NDOE listed several Provincial Assistant Secretaries of Education as members of that committee. One of these representatives was from a province outside Port Moresby where all the other committee members were located. The report noted that because of lack of funds, this particular person's travel could not be financed for him to participate in the meetings (Department of Education, 1995).

Information Flows

Information flows in this study are "the messages or communications that are transmitted between organizational parties through a variety of media" (Van de Ven & Ferry, 1980, p. 302). As interorganizational relationships are formed, they establish communication processes to channel information from one organization to another. Further, as Roberts and Grabowski (1996) stated:

> Information requirements increase as a function of increasing diversity, uncertainty, and interdependence of work flow, and formal structures can be employed to manage work flow: rules and programs, schedules, departmentalization, hierarchy and delegation, and micro coordination. (p. 416)

Examination of official documents revealed that standards have been established over the years to guide the distribution of information among these organizations (see Department of Education, 1992). In this study the formal structures arising out of the interorganizational linkages created by education laws were identified. These included rules, schedules, delegated roles and functions, and coordination schedules . The delimitation of roles and functions under the provisions of education laws requires that information flow processes between the NDOE, the TSC, and the PDEs have to be established to link the activities of all the member organizations. In the last 25 years the education system generated six major information sources that have transmitted information between and among these organizations: circulars and instructions, reports, conferences, personnel visitation, Secondary Inspectors, and circulation of minutes.

Circulars and Instructions from the national organizations to the PDEs are the most regular form of transmitting information between and among these organizations. These instruments are used to convey educational policies and operational procedures. The analysis of the data indicated that up to five circulars and instructions from the TSC and up to 20 from the NDOE are sent to the provinces each year. Annual, quarterly, and monthly reports were identified as other important carriers of information. These sources communicate summaries of the activities performed by the various organizations. The reports are useful in informing the operators about recent developments in each organization. Some of the participants identified the Senior Education Officers' Conference as a very useful information source. This conference is held annually and provides a forum for proposing and discussing new national education policies, sharing implementation problems, and informing about what each province is doing in terms of educational development. All the participants who mentioned this medium of communication rated it very highly, because it provides the time and opportunity for many problems to be identified and avoided before new policies are proposed to the National Government.

The Secondary Inspectors, because of the role they play, are the most informed officials about the operation of provincial high schools. They are a valuable link between the two national bodies and the PDEs. The knowledge they possess about the operation of provincial high schools is utilized by the participating organizations. Another information generator is personnel visitation by officials from these organizations. During the course of their tour of duties, the officials communicate face-to-face with personnel from the other organizations. In this process, they pick up and pass on information to significant other persons in their organizations. But, as stated in the discussion of the human-resource flows, the personnel visitations to the provinces or vice versa are limited by the availability of funds. Consequently, information flow through this medium is irregular. Finally, the exchange of minutes of National Education Board (NEB) and PEB meetings is also useful in informing the administrators of the progress and the problems in education throughout the country. The PEB minutes were seen as most useful by the senior officials from the NDOE and the TSC because they give them an idea of what is going on in the provinces. Because information flow from the PDEs to the NDOE is at best limited, these minutes have become a vital link in educational planning.

In conclusion, communication between and among the NDOE, the TSC, and the PDE depends to a large extent on the issuing and distribution of written documents in the form of circulars, instructions, and minutes of meetings. Consequently, communication is dominated by one-way processes. Two-way communication processes, such as the Senior Education Officers' Conference, and personnel visitations are subject to the availability of finance. Consequently, their usefulness has been curtailed. These findings propose that in mandated interorganizational linkages of organizations with allied domain and clientele, and dependent on the government for funding, human resource and information flow is greatly affected by the availability of finance, even though the organizations recognize the need for increased interaction. The irregular information flow from the PDEs to the NDOE and the TSC confirms that structural arrangements alone are insufficient to promote information flow (Gray, 1985). Other factors need to be brought to bear. One such factor is the leadership style within the organization that desires information. Leadership styles that promote collaboration and cooperation will enhance trust and good will. These, in turn, are likely to promote better information flow.

Conflict and Conflict Resolution

The organizations in this study are bound by an allied domain. The sameness of their goals and the subsequent legislation that controls the activities of all the players in the organization network sometimes results in conflict that has to be resolved. The findings on conflict and conflict resolution are discussed in three sections: Conflict Situations and Their Causes, Interorganizational Conflict Resolution, and the Effect of Conflict on Interorganizational Linkages.

Conflict Situations and Their Causes

The literature suggested that the same dynamics that operate in intraorganizational interaction are also inherent in interorganizational conflict (e.g., Jablin, Putnam, Roberts, & Porter, 1987). Thus, just as in intraorganizational processes, interorganizational "conflict . . . can be based on power differences or on domain disputes. It also can be based on ideological grounds" (Hall, 1987, p. 254). This study revealed that there are disagreements among the participating organizations. These disagreements are "ideological" in nature, concerned largely with a "way of doing things" and to a lesser extent with "who should be doing what." The sharing of responsibility in the provision of provincial high school education by these organizations means that no single organization can carry out many of its delegated functions without relying on the cooperation of the others to accomplish their parts. In Zeitz's (1980) terms, mutual interdependence upon which interorganizational linkage is based provides a fertile ground for acts of cooperation and opposition.

Interorganizational conflicts occur in the way the member organizations accomplish their roles and functions. The data seem to suggest that participants become frustrated when organizations are perceived as not carrying out their responsibilities fully or as failing to take necessary action to correct a situation. For example, perceived lacked of action by the TSC to discipline teachers causes frustration among the PDEs and the NDOE. Similarly, conflict relating to teacher appointments occurs between the TSC and the PDEs. The PDEs perceive the TSC as interfering in their functions by making changes to their appointment decisions. The TSC, on the hand, argue that the PEBs do not adhere to the laid down procedures, thus necessitating its intervention. It seems that the TSC depends on adherence to the provisions of the Teaching Service Act for the achievement of its goals. The PDEs, through the PEBs, on the other hand, emphasize the needs of students, and hence of schools. Consequently, strict adherence to the requirements pertaining to making teacher appointment decisions is not always seen as conducive to meeting the needs of their schools, and therefore they often ignore these procedures or do not adhere to them fully. This attitude is of some concern because by ignoring legal requirements, the PEBs leave themselves open to court actions that can arise from noncompliance. Interorganizational conflicts also occur over the way national policies are implemented by the provinces. Often there are differences between the NDOE and the PDEs over what aspects of a certain policy should take priority and at what speed that policy should be implemented.

Conflicts relating to political and administrative autonomy occur when one organization feel that it is being dictated to by another organization. This reaction is most common among the PDEs. The cooperation and agreement to fulfill the requirements associated with the delegated roles and functions under the provisions of the Education Act and the Teaching Service Act can be explained following Brownlee (1990). In his study Brownlee found that "the organizations tended to have similar goals and technologies and to agree upon the terms of the relationship between the organizations but conflicted on the means of achieving those goals" (p. 82). In this study the participating organizations have been charged with the provision of provincial high school education. Although there is general agreement with and respect for the delegated responsibilities, subtle differences are evident between and among the participants.

In assessing the effectiveness of the interorganizational linkages within a framework of mandated functions, conflict is inevitable because of the delimited roles and functions each organization is required to play under the provisions of both the Education and the Teaching Service Acts. The delimited roles and functions create interdependence between and among the participating organizations, which results in conflict. This conclusion confirms McMillan's (1994) finding that conflicts occur because of a high degree of interdependence. However, the common goal also helps organizations to accept the devolution of functions and to operate, albeit not successfully at times, within the limits of the delegated functions.

Two causes of interorganizational conflicts were identified in the discussion. The most prominent cause of conflict is failure by the participating organizations to adhere to the roles and functions delegated to them under the provisions of both the Education and the Teaching Service Acts. Although there appear to be little or no conflict over the delegated functions, there are many instances when one organization blames another for overstepping the boundary of responsibility. Sometimes the operators go beyond their powers because they want to accomplish a given task quickly, and the complementary organization is seen to be slowing down the process. At other times, overstepping the responsibility boundary was seen to be caused by a sheer lack of understanding and appreciation of the provisions of these legislation. The latter situation seems to have occurred in the PDEs whose Provincial Assistant Secretaries of Education were not appointed to that position through the ranks of teachers. As a result, they were perceived by the NDOE and the TSC officials not to possess a clear understanding of the division of roles and functions under the provisions of both the Education and the Teaching Service Acts. Furthermore, even if these Provincial Assistant Secretaries of Education know the roles and functions of each of the participating organizations, because they have not experienced the application of these education laws as teachers, they are less appreciative of the reasons for their existence.

A second cause of interorganizational conflict identified by the participants is related to lack of protocol, especially by certain officials in both the NDOE and the TSC. Many officials from these organizations do not inform the Provincial Assistant Secretaries of Education of their scheduled visits to the provinces. The PDEs perceive this lack of effort to contact them by many national officials as undermining the integrity of their offices. Consequently, they react by not cooperating with their national counterparts. This experience is a demonstration of differences between the Western culture of making appointments as inculcated in bureaucratic practices and the PNG tradition of "dropping in." In the PNG culture, friends and families visit each other without making a prior appointment with the host. This culture seems to be played out in interorganizational relationships, as Monge and Eisenberg (1987) suggested: "Organizations exist in social contexts; aspects of their structure often reflect attitudes at the national level" (p. 318). However, the PNG practice of arriving at a destination unannounced was perceived by some of the Provincial Assistant Secretaries of Education, who emphasized interorganizational communication based on Western perspectives, as an act of disrespect and discourtesy. The degree to which the Western conventional practice of making appointments has been adopted and is being practiced by Papua New Guinean civil servants is not known to the researcher. Nevertheless, the clash between two conventions that have their sources in different cultures is a phenomenon for further study and evaluation.

Interorganizational Conflict Resolution

In a study of interagency relationships in a rural community human-service system, Bayer (1985, pp. 8-9) found four conflict resolution techniques in use: work it out, accept an authority solution, smooth it over, and ignore it. Similarly, Robbins (1987, pp. 345-350) identified structural techniques for reducing conflict intensity: superordinate goals, reduction of interdependence, expanding resources, mutual problem solving, appeals systems, formal authority, increasing interaction, organizational evaluation criteria and reward systems, and merging conflicting units. In the same way Hall (1987, p. 255) reviewed the literature pertaining to interorganizational conflict resolution and identified six techniques: ignore the issue, smooth over by playing down the differences and emphasizing common interest, openly confronting and working through differences, submit to higher authority, contracting organizational boundary, and expanding organizational boundary.

Three conflict-resolution modes were evident in this study: confrontation, mutual discussion (also called collaboration by some researchers), and reference to higher authority. Confrontation was applied mostly in conflict resolution between the TSC and the PDEs in resolving matters pertaining to the appointment of teachers. It was also apparent in conflict resolution between the NDOE and the PDEs, although on a lesser scale. Collaboration was applied in conflict resolution between the NDOE and the TSC, and between the NDOE and the PDEs. Collaboration promotes mutual discussion of problems and takes place in one-on-one, face-to-face interactions or in group meetings such at the Senior Education Officers' Conference and Assistant Secretaries' meetings. The participants in conflict resolution collaboratively discuss and resolve differences. Sometimes conflict that cannot be resolved by the subordinates are referred to the heads of the respective organizations to solve. This approach is employed mainly by the NDOE and the PDEs. At other times conflicts cannot be resolved quickly using any of the three modes. In these cases, the affected organizations use written communication to continue dialogue in their effort to reach a settlement.

The confrontation and cooperation technique is applied in conflict resolution along the lines suggested by Banner and Gagne (1995). They postulated that confrontation and cooperation is a win-win approach "in that the conflict is faced squarely and dealt with based on facts rather than emotions (although emotions are certainly not ignored)" (p. 419). However, this approach, in the researcher's view, can lead to a win-win result only if the participants are open in their approach and demonstrate a genuine willingness to listen to and consider the other side's arguments. Because this techniques is characterized by a high level of assertiveness and a low level of cooperation, a win-lose situation is also possible. The following quotation reveals the high level of assertiveness employed by the TSC in its dealings with the NDOE and the PDEs. In the words of the Teaching Service Commissioner for Legal Matters, "If there was an appeal [by a teacher over an appointment] we would talk and write, and if that did not work, we would normally apply the directives" (TS-01). The Teaching Service Commission Chairman's words are more emphatic. In relation to a PEB's disregard of one of its rulings, the Chairman said:

> The . . . Teaching Service Act says that the Commission's ruling is final. . . . Where the Commission gives a direction, that direction is final; it must be implemented. And the law says that where you cannot, where you refuse to implement the Commission's decision, . . . you must go to the National Court and a get a court injunction. So the only way you can stop us from implementing our decision is to get a court injunction. (TS-03)

As mentioned earlier in this chapter, strict adherence to the provisions of the Teaching Service Act by the TSC often results in problems not being resolved amicably. The sometimes negative perception that many Provincial Assistant Secretaries of Education held of the usefulness of the TSC could be ascribed to the hard-line attitude the latter takes in demanding compliance.

The mutual discussion or collaboration technique was by far the most common approach to settling differences between and among the participating organizations. The comment of one senior official from the NDOE with relation to conflict resolution between the NDOE and the PDEs is worth repeating to illustrate the point. In his words:

> Honestly, I think we are a very good family. We don't let a problem continue. We all come to some very common understanding and get on with our work. . . . But when we feel that the problem is not solved, we'll continue to work on it until such times as when we say, "Okay, enough is enough. . . . Can we take this action?" We all agree to a decision . . . [and implement] it. (ND-04)

This official added that in the meantime, good working relationships with the provinces have been maintained. Mutual discussion requires interaction in problem solving. The more that people interact with each other, the more likely they are to find common interests and bonds that can facilitate cooperation (Robbins, 1987). Collaboration encourages high assertiveness and cooperation to promote a win-win situation (Borisoff & Victor, 1989).

There is a great desire to satisfy fully the concerns of both parties (Cooze, 1990). It is an attempt to move from conflict to collaboration (Johns, 1992). The "good will" reported by one senior official of the NDOE is probably a reflection of the way the NDOE resolves conflicts with the PDEs. The cordial relationships mentioned by the study participants are also reflected in the discussion of the effect of the conflict on interorganizational relationships in the next section.

It appears that the conflict situations and causes of conflict outlined in this thesis have reaffirmed the contention made earlier in this chapter that there is insufficient organization to facilitate effective interorganizational linkages. One need evidenced in these discussions is that if a mutual balance of power is to be maintained between and among these organizations, a conflict-resolution structure other than referral to the national court as provided for in the education laws should be established to mediate disputes arising from the interdependence. Whatever technique is used, in the words of Koch and Decker (1993), "the goal of conflict resolution is to craft an 'elegant solution,' that is, a solution where both parties win" (p. 17).

Effect of Conflict on Interorganizational Linkages

Robbins (1987) argued that conflict is functional when it invites the search for new and better ways of doing things that undermine complacency within the organization. Thus conflict is the "stimulus" that brings about change in the relationship of people within and between organizations. Johns (1992) added that conflict might promote change because each party in the conflict begins to monitor the other's performance more carefully. This makes it difficult to hide errors and problems from others.

In this study conflict was perceived by these organizations as integral to the professional interaction of the operators and was therefore accepted. Thus, as mentioned earlier in this chapter, efforts are always made to resolve conflicts. Because the participants perceived conflict from a professional perspective, interpersonal relationships are not negatively affected very much. Positive and negative outcomes of conflicts were reported, however.

Many participants agreed that conflict resolution leads to improved interorganizational relationships. Through mutual discussion, conflicting issues are clarified and misunderstandings cleared up. These in turn promote or strengthen interpersonal relationships. Conflict resolution also leads to member organizations reevaluating their procedures, policies, and attitudes. It often prompts the conflicting parties to reassess their practices in order to increase clarity. Ambiguity within the policies and instructions is reduced as a result of these reevaluations.

Interorganizational conflict also results in dysfunctional outcomes. One major negative outcome is that conflict leads to policies, instructions, and decisions not being implemented immediately. The interdependency that is unavoidably pervasive in these interorganizational linkages means that when one of the participating members disputes a certain decision or policy, implementation is always delayed while the conflicting parties seek a solution to the problem. The unresolved conflicts leads to "loss of time, lack of cooperation, reduced attention to organizational goals and underutilization of creative abilities" (Koch & Decker, 1993, p. 17). Conflicts also sour interpersonal relationships among the operators in these organizations, although these do not last for long. Often they cause unnecessary anxiety among the affected teachers. When disputes relating to the appointment of teachers arise between the TSC and the PEBs, teachers were reported to be anxious about their future during the time these organizations are resolving their disputes. This inevitably affects the work of the schools and the needs of their students.

The findings from this study of conflict and conflict resolution affirm Robbins' (1974) "interactive view of conflict" (p. 20) which holds that conflict improves an organization's effectiveness by stimulating change. Conflict may result in adaptation of an organization's operational practices to accommodate current circumstances, thereby enhancing its survival. Elaborating the interactionist view of conflict, Banner and Gagne (1995) stated:

> An organization totally devoid of conflict would be stagnant, uncreative, and unresponsive. The interactionist viewpoint is that *conflict can be functional*; that is, it can provide some unique benefits for the organization. . . . Conflict can help to generate new ideas and new ways of doing things. It can also bring into question organizational goals and strategies; this can lead to a healthy review of vision or direction. (p. 413)

In a similar vein Kelly (1979) contended that by attending to the differences of opinion, the positive outcomes may contribute to the health of the organization, for it is from these experiences that better methods emerge. One influencing factor promoting this attitude was that, as the organization that assumes the most critical role in the development and operation of provincial high schools, the NDOE insists that its officials continue to work with operators within the PDEs no matter what the circumstances might be. This attitude seems to have enabled the operators to make a distinction between personal and professional conflicts. In doing so, they promote cordial working relationships with the officials from the PDEs.

In the literature pertaining to conflict (for example, Cooze, 1989b; Johns, 1992; Koch & Decker, 1993; Robbins, 1987), nine common sources of conflict were identified: conflict over scarce resources, conflict over values and beliefs, conflict related to roles, conflict related to structure, conflict caused by low formalization, heterogeneity and stability of members, power conflict, people-related conflict, and communication conflict. In this study several of these common sources of conflicts were reflected: conflict over scarce resources, conflict related to roles, conflict related to structural issues, and heterogeneity and stability of the members. Each of these sources of conflict is summarized in the following paragraphs.

Conflict over scarce resources (such as money, space, power, prestige) includes issues over who should have control over the resources (Deutsch, 1973). When there is dependence on common resources by two or more organizations, the issue of equitable distribution arises, hence, potential for conflict is enhanced (Cooze, 1989b; Johns, 1992; Koch & Decker, 1993; Robbins, 1987). Conflict related to role can be caused in a number of ways. It may be caused by role overload when demands placed on the organization or an individual are far in excess of the capacity to deliver. Role conflict can also be caused by role ambiguity when insufficient information is made available to the organization on how it is to perform the role (Hall, 1977). Role conflict can also result from role dissatisfaction, when someone believes they deserve a promotion to reflect their record of accomplishment (Robbins, 1987). And it can also occur when individuals or groups are expected to carry out roles that turn out to be mutually incompatible (Cooze, 1989b).

Conflict related to structural issues arises as a result of units within organizations specializing in functions or sharing functions among several organizations. Conflict can arise if their activities are not properly coordinated (Cooze, 1989b). Highly horizontal differentiation leads to highly differentiated tasks where units' functions and the environment with which they deal are dissimilar. This increases the likelihood of conflict (Koch & Decker, 1993; Robbins, 1987). Low formalization conflicts, on the other hand, occur when rules and regulations are ambiguous. When rules and regulations are not clear, they give rise to conflict (Robbins, 1987). Heterogeneity and stability of members in the interorganizational arrangements can also lead to conflict. The more heterogeneous the group members are, the less likely they are to work together cooperatively. Heterogeneity and the stability of the members is affected by continuous turnover or recruitment of personnel who may lack the capacity to operate effectively in their roles. Constant change in the membership makeup may result in conflict (Cooze, 1989b; Robbins, 1987).

However, sources of conflict identified by the participants in the present study were not singular, but multiple. For example, the study reveals that conflict between and among the participating organizations is largely related to ways of doing things. A closer scrutiny of this conflict reveals that it is associated with the distribution of power between and among the organizations, the perception of role accomplishment, structural issues, and the heterogeneity of the participants. This finding adds to McMillan's (1994) conclusion that conflict types in interorganizational relationships are not pure and boundaries are blurred. There may be several types of conflict occurring simultaneously, but the participants in an interorganizational linkage may not be able to identify them individually.

To conclude the discussion on this topic, this study reflects the interactionist perception of conflict. It shows that conflicts are pervasive in any interorganizational relationship. They "are part of the very process of interdependence that brings various actors together" (Becouitch, 1984, p. 143). Conflict is a social process that is neither good nor bad. But if it is managed properly, it may enhance organizational life.

Effectiveness of the Interorganizational Linkages

The discussion in this part of the chapter is focused on the findings from chapter 8 of the thesis. The study results pertaining to the effectiveness of the interorganizational linkages are presented under three sections: Delimited Functions and Problems of Cooperation and Coordination, Perceived Extent of Effectiveness, and Suggested Improvements.

Delimited Functions and Problems of Cooperation and Coordination

As mentioned in chapters 5 and 6, the delegation of roles and functions, under the provisions of both the Education Act and the Teaching Service Act gives delimited powers to each of the organizations. Consequently, coordination and cooperation are necessary to implement the provincial high school policies. However, from time to time cooperation and coordination are difficult because of the different political authorities to whom the civil servants report. The PDEs are answerable to the Provincial Governments, whereas the NDOE and the TSC report to the National Government. Several participants commented that this two-tiered structure creates a division among the national and provincial officials. Many provincial civil servants often do not feel obliged to cooperate with their national counterparts. As a result, interorganizational relationships are weakened. Furthermore, the Provincial Governments, under the provisions of the Organic Law on Provincial Governments, have the power to make their own education policies (Government of Papua New Guinea, 1977). In some cases the objectives of these policies differ from those of the National Government. Consequently, policy clashes are experienced, resulting in some provinces not implementing nationally determined education plans.

This circumstance seem to suggest that there is overdependence on the structural arrangements to foster cooperation. The structural arrangements were provided in the Education Act (1970) and the Teaching Service Act (1971). These acts were passed before the provisions for the establishment of Provincial Governments were incorporated into the Organic Law on Provincial Governments. The Education Act of 1983 and the Teaching Service Act of 1988, which superseded the previously mentioned education laws, did not lead to significant changes in the delegation of roles and functions. The only significant difference was that with the creation of Provincial Governments, PEBs were established and took over the roles and functions performed previously by the District Education Boards. The Provincial Government participation in these two pieces of legislation was indirect. Thus, it cannot be taken for granted that the Provincial Governments fully supported the provisions in them. Further, since the inception of Provincial Governments in 1977, the people's understanding of the roles that the Provincial Governments should play and the powers the provinces should have, have broadened. As more educated persons were elected to Provincial Governments, the call for greater autonomy evolved.

These findings seem to support Gray's (1985) conclusion. In writing about conditions facilitating interorganizational collaboration, Gray found that external mandates often force stakeholders to form new structures. However, she proposed that "mandate alone ... [would] not generate conditions conducive to collaboration" (p. 929). She added that the structure resulting from the mandate has to be coupled with other conditions (e.g., the recognition of interdependence and balance of power) in order to work. Mandate, however, could provide a structural framework for ongoing regulation of the domain. Similarly, Cates(1983), reviewing the literature on collaborative arrangements that support school improvement, found:

> Structure appears to have little influence on [interorganizational arrangements'] effectiveness or outcomes. While some structural factors can impede or enhance the collaborative process, there was no evidence that one structure was superior to another. In particular, the level of formality seems to have little [impact], if any, on the effective delivery or exchange of resources. (p, 13)

It seems possible that the "power balance" may have changed among these organizations but the structural arrangements have not since the establishments of Provincial Governments in 1977. Consequently, lack of cooperation by some of the Provincial Governments could be a result of the disequilibrium in the power balance between the national bodies and the PDEs or the PEBs.

Perceived Extent of Effectiveness

Perceptions of the effectiveness of the interorganizational linkages between and among the NDOE, the TSC, and the PDEs differed greatly among the participants. The extent of effectiveness was rated from *just satisfactory* to *very effective*. The participants from the

NDOE and the TSC said that the relationship between the two organizations was effective to the extent that it was an ongoing, daily activity. This relationship reflects Gray's (1985) proposition that collaboration is positively enhanced by physical proximity of the stakeholders. Because these two organizations are housed in the same building complex in Port Moresby, the physical proximity facilitates frequency of contacts on a daily basis.

The effectiveness of the linkages between the NDOE and the PDEs, on the other hand, depends on the persons involved in interorganizational activities. Some, -- for example, the Deputy Secretary of Education for Standards -- described the relationships as "just satisfactory." The relationships are satisfactory as long as the operators from the various organizations remain within the bounds of their roles. Other participants, such as the National Secretary of Education, rated the linkages between the NDOE and the PDEs as open and harmonious. Taken together, the effectiveness of the interorganizational linkages between these organizations depends a great deal on "good will" on the part of the operators.

The effectiveness of relationships between the TSC and the PDEs appears somewhat strained. Too often officials from the PDEs do not agree with the decisions of the TSC with regard to teacher appointment and teacher discipline, and consequently become reluctant to adhere to the directions issued by the TSC. It is evident from the analysis of the data that communication between these two organizations often takes place under duress. The TSC depends a great deal on its legal powers to enforce compliance by the PEBs. The failure by many PEBs to adhere to the legal provisions probably leads to the TSC's insistence on due process being applied.

Alternatively, Ackerman's (1984) metaphor of "organization as energy field" can be used to explain the behavior of these two types of organizations. Within this energy field there are competing forces. The organization's purpose controls and directs the energy by the competing forces. Ackerman went on to identify the two types of leaders, the *flow-state* manager and the *solid-state* manager. Banner and Gagne (1995) translated this metaphor:

> [The flow-state manager is] the person who can orchestrate the competing forces into a coherent, synergistic whole. This person makes sure the energy does not become blocked and that everyone within the organization remains "charged" with purpose. . . . [The solid-state managers, on the other hand, would] try to control through policies, procedures, formal structure, and authority. So the job of the flow-state manager is to articulate the vision/purpose of the organization and assist others in aligning with that vision. The solid-state counterpart attempts to control workers with rules, regulations, policies, and procedures. (p. 85)

The application of the provisions of the Teaching Service Act to gain compliance from the PEBs and the latter's resistance to comply would seem to indicate that operators in the TSC and the PEBs viewed the control of the "energy field" from a solid-state manager's perspective. According to the TSC, the rules were there to be followed, and PEBs were duty bound to do just that. But the PEBs, on the other hand, insisted that the TSC was interfering with their responsibility.

Thus, as stated earlier in this chapter, structures alone cannot guarantee cooperation. People view the same rules and regulations differently. A structure can be judged effective to the extent that it achieves the purposes for which it was created and that all the interacting agencies respect it. Although it was generally claimed that all of these organizations agreed with the delegation of functions relating to the appointment of teachers, there appeared to be some discontent among the Provincial Assistant Secretaries of Education as to what might be the appropriate role for the TSC in these matters.

Factors promoting effectiveness. Several factors were identified as contributing to the effectiveness of the interorganizational linkages. First was the common goal that the participating organizations focused on accomplishing. That is, these organizations were interested in providing education for the children of PNG. Sharing this goal helped to reduce conflicts among them. The effective relationship between the TSC and the NDOE was seen as a factor of the proximity of the two organizations. The regular interaction among the participants promoted informal and nonformal relationships that strengthened the formal linkages.

A third factor contributing to the effectiveness of the interorganizational linkages was the quality of leadership provided, in particular by the heads of the TSC and the NDOE. The openness and personality of the leaders in these two organizations were seen to be conducive to effective interorganizational relationships. These results support Inskip's (1992) contention that "strong personal leadership is critical for the development of planning networks" (p. 383). As individuals, the heads of the NDOE and the TSC were perceived to be leaders who promoted participation and paid attention to what the other organizations' views were. This conclusion was especially true of the National Secretary of Education and the Teaching Service Commission Chairman.

Familiarity with the provisions of the education laws was identified as the fourth factor promoting effectiveness. Most Provincial Assistant Secretaries of Education knew the provisions of these laws and, consequently, the provincial functions. This knowledge allowed the operators to function within their delegated areas, which helped reduced friction and conflicts.

A fifth factor, the Senior Education Officers' Conference, was singled out unanimously as the most useful structure for interorganizational communication and cooperation. This conference provided a forum and a venue for interorganizational exchange of information and resolution of conflicts. The leadership provided by the National Secretary of Education at these conferences promoted a harmonious atmosphere for the discussion of policy and policy implementation.

The last factor identified was the number of education boards involved in educational decision making. The wide representation allowed in some of these boards was seen as promoting effective interaction through broad representation, that led to quality decision making.

In summary, these findings support Gray's (1985) conclusions that structural arrangement have to be supplemented by other factors to enhance collaboration and cooperation. The study also showed that formal mandates alone were insufficient to promote participation and communication between and among organizations with a common goal whose daily activities were governed by an external force. Voluntary structures such as the Senior Education Officers' Conference added to the intensity and quality of interaction.

Factors inhibiting effectiveness. Though the interorganizational linkages were seen to be satisfactory, they could be improved if the education system in which these organizations operated was more attuned to change. Like any other bureaucratic organization, the system ground slowly and did not react quickly to changes that were taking place all the time. The interorganizational linkages were also subject to the quality of communication and dialogue among the operators. Oftentimes communication and dialogue occurred inconsistently, which prevented the smooth flow of resources and information.

As a large bureaucratic interorganizational structure, the system will probably continue to operate as it has done with little change. The quality and frequency of communication and dialogue could be improved, however. Some suggestions made by the participants to improve the interorganizational relationships are identified and discussed in the next section.

Suggested Improvements

Several suggestions for improvement of the relationships among these organizations were made by the participants. Three of these: increased consultation, regionalizing TSC office, and improving human resource skills are detailed in this section.

Increased consultation and dialogue were seen as important in improving the linkages among the participating organizations. The participants called for increased visits to the provinces by officials from the NDOE and the TSC. The face-to-face interaction promoted through these visitations would enable operators to discuss and resolve problems before they could escalate. Another suggestion made by the participants was to regionalize the TSC office to improve access by teachers and PDE officials. Currently, the TSC office is located only in Port Moresby, the nation's capital. Communication between the nation's capital and the provinces can be very difficult at times. It is even more difficult for individual teachers in the provinces, outside of Port Moresby, to access the TSC office easily. Thus, if the TSC had offices at either the regional level or the provincial level, access would be greatly improved. Finally, analysis of the data seemed to indicate that research and planning capacities as well as human-relations skills need improving. The education system, like the rest of the civil service system, appears to lack the technical skills necessary to carry out these functions. Inservice training and education were seen as means through which the operators could acquire these skills.

The problem of lack of skilled human resources is pervasive throughout developing countries. Nsaliwa (1996), for example, noted that in Malawi educational leaders are appointed from among the ranks of teachers. These teachers receive little or no training for the new tasks they are called upon to perform. The PNG experience is similar to that of Malawi. Although PNG has, to some extent, established inservice training schemes to equip its officials with new skills and knowledge to perform their tasks, these schemes are limited in their scope, and too often, the training takes place only after the person has been appointed to the new position. The PNG situation is exacerbated by the claims that in some provinces the authorities appointed to the Provincial Assistant Secretary of Education and Provincial Planner positions are people who are perceived to be not qualified. Furthermore, they are not former teachers and, consequently, do not understand the specific problems of provincial high schools.

Summary and Conclusion

The interorganizational network described in this thesis was created as a result of the enactment of the Education Act of 1970 and the Teaching Service Act of 1971. The passing of the Education Act of 1983 and the Teaching Service Act of 1988 superseded the earlier legislation. The new laws effectively transferred the roles and the functions of the District Education Boards to the PEBs, which operated under the auspices of Provincial Governments. The PDEs were established by the Provincial Governments to implement the decisions of the PEBs. The resultant two-tiered civil service structure generated a context in which cooperation and coordination had to be worked at and not demanded. Boundary-spanning activities therefore were necessary to promote interorganizational linkages. The legislation mentioned in this part of the chapter delegated delimited roles and functions to each of these organizations. In general, these organizations respected the division of roles and functions. Dissensus, however, occurred in the way certain roles and functions was carried out. To some degree role and functional dissensus, however subtle, were also detected.

The enactment of the Education Act and the Teaching Service Act effectively determined the structural arrangements that had to be formed to operationalize the interaction, including those pertaining to provincial high schools. As an organizational network with a common domain and clientele, resulting from government legislation, the interaction between and among the member organizations was highly structured and formalized. As mentioned earlier in this chapter, the roles and functions of each of these organizations were explicated in the Education and the Teaching Service Acts. The delimited roles and functions necessitated interdependence between and among the interacting organizations. In these interactions, informal and nonformal relationships among the participants were evident. These relationships contributed to the mutuality of the interorganizational linkages.

The study of resource and information flows between and among the NDOE, the TSC, and the PDEs revealed the following. There was no resource exchange on a reciprocal basis. Physical and human resources generally flowed from the national to the provincial levels. The PDEs, in particular, depended a great deal on the NDOE and the TSC for technical advice and assistance. However, the amount and the regularity of technical assistance was subject to the availability of funds. Thus, even though all of these organizations were aware of the need for greater face-to-face dialogue, there was little they could do beyond their financial capacities. Most recently, the Secondary Inspectors, who are NDOE officials based in the provinces, have received financial and transport assistance from the PDEs to help them visit schools. This assistance, though most appreciated by the NDOE, appears to be minimal in size and varies from province to province.

Six major information sources that transmitted information between and among these organizations were identified: circulars and instructions, reports, conferences, personnel visitation, Secondary Inspectors, and circulation of minutes. These were categorized as *one-way* communication and *two-way* communication sources. One-way communication media includes circulars, instructions, reports, and circulation of minutes. Two-way communication channels included personnel visitation, the Senior Education Officers' Conference, and the Secondary Inspectors. The flow of information through the one-way communication channels is regular, especially from the NDOE, and the TSC to the PDEs. Information flow from the PDEs to the two national organizations is sporadic. The two-way communication approaches were highly valued because they provide face-to-face dialogue resulting in greater understanding and better problem solving. However, these channels of communication are limited to the availability of funds.

The organizational network in this study was created as a result of the enactment of the educational laws. The resulting delimitation of roles and functions necessitates interdependence between and among the NDOE, the TSC, and the PDEs. Consequently, conflict is inevitable. Interorganizational conflict occurs largely over the way certain functions are performed. Some conflicts related to administrative and political autonomy are also evident. Two causes of conflict were identified in the study. First, conflict occurs as the result of failure by an organization to operate within the provisions of the education laws. Second, conflict is also caused by a lack of adherence to protocol, especially by some of the officials from the NDOE and the TSC in not informing the PDEs of their intended visits to the provinces. Because the PDEs perceive this as a lack of respect, they refuse to cooperate.

By and large, the participants perceived conflicts from an interactionist perspective and work hard to find solutions for them. Three conflict resolution modes were evident in this study: confrontation, mutual discussion (also called collaboration by some researchers), and reference to higher authority. Confrontation is applied mostly in conflict resolution between the TSC and the PDEs in resolving matters pertaining to the appointment and discipline of teachers. It is also applied in conflict resolution between the NDOE and the PDEs, although to a lesser degree. This approach does not always result in an amicable resolution of conflict. Collaboration, on the other hand, is applied in conflict resolution between the NDOE and the TSC, and between the NDOE and the PDEs. Collaboration promotes mutual discussion of problems and is used in one-on-one, face-to-face interactions or in group meetings. The participants face the conflicts and collaboratively discussed and resolved them. This approach enabled the organizations to maintain the cordial relationships that exist. The third mode concerns reference to higher authority. Sometimes conflicts that cannot be resolved by subordinates are referred to the heads of the organizations to solve. This approach is used to settle differences between the subordinates of NDOE and the PDEs.

In conclusion, the mandated context in which the interorganizational linkages occur between and among the NDOE, the TSC, and the PDEs reveals that these structural arrangements, on their own, are not enough to guarantee mutual cooperation among them. As reported in the study, some of the participants viewing interorganizational arrangements as static entities contributes to dysfunctional relationships. According to some of the participants, the management emphasizes adherence to the provisions of the education laws to the detriment of maintaining positive interorganizational linkages. However, the nature of interdependence reported in this study was that the behavior of these organizations could be best understood as "'sociotechnical systems . . . to capture the interdependent qualities of the social and technical aspects of work" (Morgan, 1986, p. 44). To achieve a balance in the technical and social sides of work in an interorganizational setting, the participating organizations need to view organizations like organisms that are open to their environment and must achieve an appropriate relation with that environment if they are to survive (Morgan, 1986, p. 45). Because the regulated structure, and hence interdependence, do not always guarantee mutual cooperation, the said legislation should be periodically reviewed to promote cohesiveness in the system.

Finally, the effectiveness of the linkages among the focal organizations of the study appears to be dependent on the competence of the individuals who formulate it and who operate it. This study revealed the importance of skills and knowledge in interorganizational linkages. The background and skill of the personnel involved in these interorganizational relationships has an impact on the outcome that is experienced by the participants. Successful interorganizational collaboration and cooperation require participants who envisioned problems from others' perspectives. To achieve creative and workable solutions to interorganizational problems, the leadership needs to develop strategies that are conducive to managing the interdependence inherent in these highly formalized interorganizational relationships.

CHAPTER 10

SUMMARY, IMPLICATIONS, AND CONCLUSIONS

This chapter has three purposes. First, it provides a summary of the findings of the study. Second, it discusses the implications of this study for theory, practice, and research on interorganizational relationships. Third, it presents several conclusions to the study and the researcher's reflections on the methodology employed in the study.

Overview

The study sought to investigate the interorganizational linkages and their effectiveness between and among the National Department of Education (NDOE), the Teaching Service Commission (TSC), and the Provincial Divisions of Education (PDEs) in the operation of provincial high schools in Papua New Guinea (PNG). This overview of the study reviews briefly the conceptual framework employed in the research, the characteristics of the participants who took part, and the research methodology.

Conceptual Framework

A review of the relevant literature identified several dimensions of interorganizational linkages that should be studied. The frameworks suggested by such notable researchers in the field as Marrett (1971), Van de Ven and Ferry (1980), Whetten (1981), Hohomann (1985), Hall (1987, 1996), and Intriligator (1992) were combined to produce five frames: context, structure, process, conflict and conflict resolution, and the effectiveness of relationships which directed data collection and analyses.

Under the contextual frame the reasons for forming interorganizational linkages were investigated. These included identifying the technical, legal, political, demographic, and cultural contexts in which the organizations existed, and the resource and information interdependence between and among the participating organizations. The investigation was also focused upon the domain consensus-dissensus in the interorganizational network.

Structures are the administrative arrangements that are established to define the role relationship between and among members (Van de Ven & Ferry, 1980). The structural variables selected for analysis in this study were the basis of interaction, formalization, mandatedness, intensity, complexity, and centralization.

Process in interorganizational linkages is the flow of resources and information between and among the member organizations in a network. Resource flows are units of value that are transacted, and information flows are the messages or communications that are transmitted between the interacting organizations (Van de Ven & Ferry, 1980). In this study the investigation of process was focused on the intensity, direction, and frequency of the resource flows and exchanges and the information flows and exchanges among the participating organizations.

Conflict is a factor that can have a great deal of influence on the effectiveness of interorganizational linkages. For this reason it was included as a separate variable for investigation. The term *conflict* has been difficult to define, but for the purpose of this study, conflict is defined "as an 'interactive state' manifested in incompatibility, disagreement, or differences within or between social entities" (Rahim, 1986; cited in Hanson, 1991, p. 273). The study was focused on understanding the nature of interorganizational conflicts and their causes. Thus, effort was made to determine the characteristics of the parties involved, the social environment in which conflicts occur, how conflicts are resolved, and their consequences on the effectiveness of the interorganizational linkages.

A major purpose of this study was to determine the effectiveness of the interorganizational linkages between and among the participating organizations in the accomplishment of provincial high school goals. Pennings (1980) stated that organizational effectiveness is important for pragmatic considerations. However, earlier studies have made reference to organizational effectiveness only sporadically; consequently, there is no agreement as to what aspect of this phenomenon should be studied. In the present study a global measure of effectiveness of organizational effectiveness was used to determine how effective the interorganizational linkages were in achieving the goals of provincial high schools.

Participants

Because interorganizational linkages involve people who occupy boundary spanning positions, participants selected for this study were those involved in or had oversight of the operation of provincial high schools. They were people whose responsibility required them to interact with the other participating organizations. Thus, the study employed a purposive sample of 16 from the NDOE, 4 from the TSC, and 11 from the PDEs.

Research Methodology

This study employed qualitative methods to investigate the phenomenon of interorganizational relationships. Data were gathered by means of interviews (enquiring), reviewing written materials prepared by others (examining), and participant observation (experiencing) (Wolcott, 1994). The research instruments for the study are summarized below.

Semistructured interviews. A semistructured interview schedule consisting of 21 questions was used with the 31 participants. The interviews were audiorecorded, and these recordings were summarized. The summaries were returned to the respondents, who were given the opportunity to make changes if they wished. The corrected interview summaries were signed and either returned to the researcher by mail or were personally collected by the researcher. Later, the interviews were transcribed in full. The data from the interviews were categorized according to the research questions, and they provided the major sources of information for the research questions.

Document search. Document analysis provided the researcher an opportunity to search for information that could not be observed directly. The document search involved careful review of official documents including circulars, minutes of Senior Education Officers' Conference, annual reports and instructions, TSC determinations, the Secretary's Instructions, and Ministerial Instructions. The document search was limited mainly to the most recent years (1994 and 1995). A few of the official documents made available to the researcher dated as far back as 1975.

Journal writing. A journal was used in this study to keep a written account of what the researcher heard, saw, experienced, and thought in the course of "collecting and reflecting on the data" (Bogdan & Biklen, 1992, p. 107) pertaining to interorganizational linkages between and among the NDOE, the TSC, and the PDEs. The researcher made daily entries in the journal on his observations of interactions with the respondents either face-to-face or through telephone contact. Also recorded in the journal were the feelings of the researcher, as well as comments and remarks made by people who had experience with the operation of provincial high schools.

Participant observation. Direct observation was used to observe firsthand two meetings: the Senior Education Officers' Conference and the annual Ratings Conference. The Senior Education Officers' Conference was attended by all the Provincial Assistant Secretaries of Education, as well as senior officials from both the TSC and the NDOE. The Ratings Conference was attended by the same people who attended the Senior Education Officers' Conference, as well as Secondary Inspectors and Senior Primary Inspectors. During the meetings the researcher took note of the setting, participants, activities and interactions, frequency and duration of discussion of topics and events, and subtle factors such as informal and unplanned activities like after-hours conversations that took place around the meeting venues.

The different data collection methods were useful in that on several occasions the data collected from these different sources corroborated certain findings. Furthermore, they provided a richness to the information collected; and consequently, discussions of the findings, in the researcher's view, were well grounded.

Data analysis. A two-phase data analysis approach was employed in this study. Phase 1 of the data analysis which took place during the data collection phase, provided an opportunity for the researcher to verify and clarify all data collected, to formulate further interview questions for investigation, and to fill any gaps and omissions that became obvious. The initial data analysis enabled the researcher to determine whether sufficient information was available to complete the project.

The second phase, the post-data collection phase, took place after all the interview data had been collected and transcribed. First, the documents were read a second time and pertinent information noted. Second, the journal and observational notes were analyzed and categorized. Then, using the research questions as the starting guidelines, the researcher read through all the transcripts and coded relevant issues and themes under each group of research questions and category of participants using a starting list of codes. The list of codes expanded as the data analysis progressed (Appendix C).

Summary of the Findings

The detailed findings of the study were presented in chapters 4 through 8. The purpose of this part of the final chapter is to summarize these findings under headings associated with the research questions of this study.

Contexts of Interorganizational Linkages

This section summarizes the findings associated with the first research question, that sought to determine the legal, political, and social context for the interorganizational linkages associated with the operation of provincial high schools. The findings relate to four themes: legal and political contexts, interdependence between and among the participating organizations, boundary spanning, and domain consensus-dissensus.

Legal and political contexts. The interorganizational linkages were formally created as a result of the enactment of the Education Act of 1970, and the Teaching Service Act of 1971. These laws decentralized educational authority to district levels, where greater community participation in educational decision making would be fostered. Consequently, the TSC and the Provincial Education Boards (PEBs) were established and assumed some of the educational authority formerly held by the NDOE. Following establishment of the provincial government system in the late 1970s, the Education Act of 1983 and the

Teaching Service Act of 1988 were passed and superseded the earlier legislation. Under the new legislation Provincial Divisions of Education were created. The PDEs became the administrative arms of the PEBs, and both were made answerable to their respective Provincial Governments. Thus, interorganizational linkages in this study were operating within a legislative mandate.

Interdependence among the NDOE, the TSC, and the PDEs. Interdependence among these organizations was the result of the educational legislation mentioned above. These laws defined mandates for each of the participating organizations. The mandates provided for certain functions to become shared, making interdependence an integral part of the interaction among the organizations in order for the associated tasks to be attended to. The findings revealed that interdependence is prevalent in educational planning, teacher appointments and servicing of teachers' needs, and establishment of new provincial high schools.

Boundary spanning. The study revealed that there is no overarching organization to coordinate the interorganizational linkages among the NDOE, the TSC, and the PDEs. Boundary transaction occurs at two levels: policy and operational. At the policy level boundary spanning takes place among the heads of the organizations, communicating new educational policy. At the operational level boundary spanning occurs from different offices, usually at the divisional level. Thus, at the operational level boundary spanning is driven by the need to accomplish a given task, necessitating direct interaction between operators whose tasks are interrelated.

Domain consensus-dissensus. The findings indicated that, in general, there is consensus among the participating organizations with regard to the delegation of roles and functions in the education laws. Dissensus occurs in the way certain functions are performed. With regard to teacher appointments and teacher discipline, the PDEs complain that the TSC is interfering with their decisions. The TSC, on the other hand, claims that the PEBs failed to apply the correct procedures, consequently doing a disservice to the teachers. This necessitates their involvement.

Dissensus between the NDOE and the PDEs occurs in educational policy implementation. Sometimes the nationally determined educational policy differs from the provincial ones, resulting in uneven educational development. With regard to educational policy, many Provincial Governments feel that functions such as procurement of school supplies should be left to the local authorities without National Government interference. They insist that they are in a better position to know the real needs of their schools.

Structures of Interorganizational Linkage

The discussion in this section summarizes the findings of chapter 5, that provided an answer to the fifth research question, which sought to measure the extent to which the relationships between and among the NDOE, the TSC, and PDEs were mandated, clearly specified, and standardized. The associated findings fall into three categories: formally mandated linkages, informal and nonformal relationships, and the influence of voluntary structures in interorganizational linkages.

Formally mandated linkages. The roles and functions of each of these organizations pertaining to the operation of provincial high schools were derived from the Education Act of 1983 and the Teaching Service Act of 1988. Briefly restated, the NDOE is responsible for the preparation and overall supervision of the implementation of the national education plans and the provision of financial assistance to the PDEs for building and maintaining provincial high schools. It is also responsible for determining the qualifications and standards required for the registration of provincial high school teachers, inspection of schools, and certification and the assessment of teachers.

The TSC assumed responsibility for the employment and the discipline of teachers. It therefore has the final say in the appointment, promotion, transfer, discipline, suspension, and dismissal of teachers who are members of the National Teaching Service.

The Provincial Education Boards (PEBs) have, among other functions, responsibility for the establishment of provincial high schools, for the day-to-day supervision of provincial high schools, and for the maintenance of school facilities. The PEBs are also responsible for the appointment, promotion, discipline and transfer of teachers within the province.

A close scrutiny of the legislative delegation of responsibility shows that there are concurrent functions in which two or more of these organizations played a part. Consequently, operational procedures were established to link all of the complementing activities towards goal achievement. An analysis of documents revealed that operational procedures associated with all major interdependent functions were clearly stated in circulars and statements (Department of Education, 1990).

Informal and nonformal linkages. In the PNG context both informal and nonformal linkages, as described by Sayles (1961), were evident. Informal and nonformal linkages were identified as having a positive effect or "impact" on the effectiveness of the interaction between and among the operators in the member organizations. Informal linkages were identified in terms of after-hours activities of the participants. These relationships enabled the participants to interact with each other in a more relaxed atmosphere than they did with others whom they did not know well outside their work place. Nonformal relationships, however, were promoted mostly through greater understanding of the reasons for interaction between and among the participating organizations. The greatest factor identified by the participants as contributing to the shared attitudes and values that facilitated nonformal linkages was the teaching experience of the great majority of the operators. The common bond of having been classroom teachers made possible their cooperation and interaction. One important impact of nonformal relationships was that operators were able to discuss issues with officials from the other organizations "on an informal basis" before using the official bureaucratic apparatus to formalize decisions. The nonformal relationships generated "good will" among the operators within the three types of organizations.

Voluntary interorganizational linkages. This study also found what the author called *voluntary interorganizational linkages*. In some ways these were special kinds of nonformal linkages. Two particularly influential organizations were identified: the Senior Education Officers' Conference and the Ratings Conference. The interactions in these conferences are intense and constructive. Of the two, the Senior Education Officers' Conference seems by far the more influential. The outcomes of these conferences greatly influence educational policies and their implementation. Furthermore, a great deal of cooperation and interdependency is demonstrated during the meetings. The Senior Education Officers' Conference, in particular, is well attended, and its outcomes help promote cohesiveness within the education system.

Resource and Information Flow Linkages

The third research question sought to measure the resource and information flows between and among the participating organizations and to determine ways that these organizations influence each other's activities. The findings from the study relating to resource and information flows were detailed in chapter 6. In this section those findings are summarized under four headings: Resource Flows, Information Flows, Obstacles to Resource and Information Flows, and Suggestions for Improvements.

Resource flows. Resource flows were identified in terms of human and physical resources. By and large, human resources flow from the NDOE to the PDEs. The PDEs depend on the expertise of the NDOE to assist them in educational planning and administrative issues. The frequency of personnel visitation to the provinces is greatly affected by the availability of finance to the NDOE and the TSC to pay for travel. Physical resources from the PDEs include the provision of office space and facilities to Secondary Inspectors and Regional Guidance Officers stationed in the provinces. In recent years the Secondary Inspectors have also received financial and transport assistance to enable them to carry out their inspection visits. In general terms, there is very little physical-resource sharing among these organizations.

Several problems were identified by participants as factors that hindered the smooth flow of resources among these organizations. Shortage of funds is the main obstacle to effective interorganizational interaction. Procedural difficulties are experienced in the processing of teachers' fortnightly pays. From the completion of the resumption of duty forms at schools to their arrival at the salary section for action is a long process involving numerous links, and often leads to some teachers not being paid on time. Lack of capacity among the operators, which is prevalent in all of the organizations, also hinders the interorganizational linkage efforts.

Information flows. In the last 25 years, the education system has generated one-way and two-way communication media. One-way means of communication include circulars and instructions, reports, and circulation of minutes. The two-way processes are conferences, personnel visitation, and Secondary Inspectors. Of the one-way communication media, circulars and instructions from the national organizations to the PDEs are the most regular form of information transmission between and among these organizations. These sources are used to convey educational policies and operational procedures. Annual, quarterly, and monthly reports were identified as other important means of information exchange. These reports are useful in informing the operators about what each organization is doing. Finally, the exchange of minutes of the NEB and the PEBs was also found to be useful in informing the administrators of the progress and the problems in education throughout the country. The PEB minutes were seen as most useful by the senior officials from the NDOE because they give them an idea of what is going on in the provinces. Because information flow from the PDEs to the NDOE is at best limited, these minutes provide an important link in educational planning.

Of the two-way processes, the Senior Education Officers' Conference, an annual event, provides a forum for proposing and discussing new education policies and sharing implementation problems and information about what each province is doing in terms of educational innovations. The great majority of participants felt that the Senior Education Officers' Conference provides the time and opportunity for potential problems to be identified, and perhaps avoided, before new policies are proposed to the National Government.

The Secondary Inspectors, because of the role they play, are the most informed officials about the operation of provincial high schools. They are a valuable link between the two national bodies and the PDEs. Another means of information exchange is personnel visitation by officials from these organizations. In the course of their "tour of duties," these officials are able to communicate face-to-face with personnel from the other organizations. In the process they pick up and pass on information to other significant persons in their own and the other organizations.

Obstacles to resource and information flows. With regard to resource flow, four obstacles were identified in the study. The greatest difficulty is inadequate funding of all of the organizations. To a large extent, all of the organizations depend on National Government funding. Because of the many responsibilities the National Government has to fulfill, education is never allocated sufficient funding to meet all of its obligations. The second obstacle relates to procedures involved in accessing available resources by the NDOE and the PDEs. In this regard, cash flow problems are experienced, resulting in activities not being completed as planned. Other problems caused by procedural difficulties include many teachers not being paid on time and bringing expatriate teachers to the provinces. The third difficulty affecting the smooth flow of resources is the law and order problems in certain parts of the country. This problem affects the smooth movement of human resources to the affected areas. Finally, lack of capacity was identified in terms of the number and the caliber of the personnel occupying strategic positions in these organizations. Lack of capacity often results in functions not being completed satisfactorily.

Three major obstacles to information flows were identified by the participants. First, structural difficulties exist because officials at the PDEs are answerable to the Provincial Government, whereas those in the NDOE and the TSC report to the National Government. Because of these different structural allegiances, oftentimes problems of information flows are experienced. When operational standards are not adhered to, there is very little that any of the organizations can do to enforce compliance. Second, inadequate information flow among these organizations is also perceived as a function of lack of capacity, especially with the PDEs. Third, the NDOE and the TSC experience anxiety over whether the circulars and instructions they send out to the PDEs are read and disseminated to others who should also receive them. There were claims by the NDOE and the TSC participants that these circulars and instructions are not read, or if they are read, that they are not understood by the educational authorities in the provinces or duplicated and passed on to teachers in the schools.

Suggestions for improvement. Suggestions were made by the participants for improving resource flows and information flows. With regard to resource flows, many participants called for reducing the number of links in the interorganizational structure to improve access and delivery, as well as to increase the capacities of the PDEs to expedite resource flow. The common perception was that if the position of the Provincial Assistant

Secretary of Education were declared a "designated position," the National Secretary of Education would appoint these officials, and they would become answerable to him. The National Secretary of Education would have the power to take action on Provincial Assistant Secretaries of Education who do not perform well at their work. Communication would be much improved because the National Secretary of Education would be able to instruct the PDE officials to follow the standard operating procedures. The participants also contended that the responsibility for the payment of teachers' salaries should be delegated to the PDEs in full to speed up the process of paying teachers. Similarly, in order to improve educational planning and project design capacities, training for PDE officials should be focused on acquiring skills in planning, project design and evaluation, and report analysis to increase the confidence and the competence level of the operators.

Also with regard to information flow, the education system depends on conventional means of transmitting information. Many participants saw this as problematic because information does not always flow through or arrives late at its intended destination. Therefore, computerization of the information system, according to many, would enable all organizations to receive information promptly and to access the information as required.

Conflict, Conflict Resolution, and Outcomes of Conflict

This section summarizes the findings related to the fourth research question, that sought to describe interorganizational conflict, its resolution, and the outcomes of conflict. The findings are summarized under Conflict Situations and Causes of Conflict, Conflict Resolution, and the Effect of Conflict on Interorganizational Relationships.

Conflict situations and causes of conflict. Interorganizational conflicts occur over the way the member organizations accomplish their roles and functions. Between the NDOE and the PDEs, interorganizational conflicts occur over what aspects of a certain national education policy should take priority and at what speed that policy should be implemented. Conflict relating to teacher appointments occur between the TSC and the PDEs. The PDEs perceived the TSC as interfering in their function by making changes to their appointment decisions with no apparent reasons. Conflicts relating to political and administrative autonomy occur when one organization feels that it is being dictated to by another organization. In general, though, these conflicts do not have any great adverse effect on the operation of provincial high schools.

Two causes of interorganizational conflicts were identified. First, and the most prominent factor, is the failure by the participating organizations to adhere strictly to the roles and functions delegated to them under the provisions of both the Education and the Teaching Service Acts. These situations arise when operators go beyond their powers because they want to accomplish a given task quickly and the other complementing organization is seen to be slowing down the process. At other times the overstepping of the responsibility boundary is caused by a sheer lack of understanding and appreciation of the provisions of the legislation. A second cause of interorganizational conflict is related to protocol, especially by certain officials in both the NDOE and the TSC. Many officials from these organizations fail to inform the Provincial Assistant Secretaries of Education about their schedules for visits to the provinces. Consequently, the PDEs react by not cooperating with their national counterparts.

Interorganizational conflict resolution. Three conflict resolution modes -- mutual discussion, reference to higher authority, and written communication -- are employed in interorganizational conflict resolution. Mutual discussion of problems was identified as the most common mode of conflict resolution and takes place in a one-on-one, face-to-face interaction or in group meetings such as the Senior Education Officers' Conference and Assistant Secretaries' meetings. Sometimes, conflict that cannot be resolved by the subordinates are referred to higher authorities, the heads of the organizations, to resolve. This method is applied mostly in certain interpersonal conflicts between the NDOE and the PDEs. At other times conflicts cannot be resolved quickly. In these kinds of conflicts the organizations use written communication to continue the dialogue to resolve conflict.

Effect of conflict on interorganizational linkages. Positive and negative outcomes of conflicts were reported. Many participants agreed that conflicts and their resolution leads to improved interorganizational relationships. Through mutual discussion, conflicting issues are clarified and misunderstandings cleared up which in turn promotes or strengthens interpersonal relationships. It usually prompts the conflicting parties to reassess their practices to decrease ambiguity within their policies and instructions. One major negative outcome of interorganizational conflict is that it results in policies, instructions, and decisions not being implemented immediately. The interdependency that is unavoidably present in these interorganizational linkages means that when one of the participating bodies disputes a certain decision or policy, implementation is delayed while the conflicting parties find solutions to the problems. Conflict also sours interpersonal relationships among the operators in these organizations, although, this did not last for a long time. Often conflict between senior officials causes unnecessary anxiety among the teachers.

Effectiveness of Interorganizational Linkages

The fifth research question explored the extent to which the linkages between and among the NDOE, the TSC, and the PDEs were perceived to be effective. The sixth research question addressed the ways in which these linkages pertaining to the operation of provincial high schools could be improved. The findings pertaining to these two research questions are summarized in this section.

Perceived effectiveness of the linkages. The effectiveness of the interorganizational linkages between and among the NDOE, the TSC, and the PDEs ranged from *just satisfactory* to *very effective*. The participants from the NDOE and the TSC perceived the relationship between their two organizations as effective to the extent that it is an on-going, daily activity. The effectiveness of the linkages between the NDOE and the PDEs, on the other hand, depends on the persons who ware involved in interorganizational activities. Some -- for example, the Deputy Secretary of Education for Standards -- described the relationships as "just satisfactory." Other participants, such as the National Secretary of Education, rated the linkages between the NDOE and the PDEs as open and harmonious. Taken together, the effectiveness of the interorganizational linkages between the NDOE and individual PDEs depends a great deal on "good will" on the part of the operators.

The relationship between the TSC and PDEs appears somewhat strained. Communication between the TSC and individual PDEs often takes place under duress. The TSC depends a great deal on its legal powers to enforce the implementation of its decisions. It is possible that the PDE resistance to directions issued by the TSC is caused by the latter's dependence on the legal powers it has in matters relating to teachers.

Several factors contribute to the effectiveness of the interorganizational linkages. First is the common goal of providing education to the children of PNG which these organizations aimed to accomplish. Sharing a common goal helps to reduce conflicts among them. Second, the effective relationship between the TSC and the NDOE was seen as a factor of the proximity of the two organizations. Both organizations are housed in the same building in Port Moresby, and therefore interorganizational interaction takes place a great deal on a face-to-face basis, which promotes informal and nonformal relationships that enhance the formal relationships.

Third, the quality of leadership provided, in particular by the heads of the TSC and the NDOE, also contribute to the effectiveness of the interorganizational linkages. The openness and personality of the leaders in these two organizations were seen to be conducive to effective interorganizational relationships. A fourth factor promoting effectiveness is familiarity with the provisions of the education laws. Most participants know the provisions of these laws, and this allows the operators to function within their delegated areas, which helps reduce friction and conflicts.

The Senior Education Officers' Conference, the fifth factor, was singled out unanimously as the most useful structure for interorganizational communication and cooperation. This conference provides a forum and a venue for interorganizational exchange of information and resolution of conflicts. Participation at this conference provided an opportunity for the participants to network with others, and to form informal and nonformal linkages that are useful to accomplish interorganizational goals. The sixth factor, the number of education boards involved in educational decision making, provides for wide stakeholder representation, which promotes effective interaction and quality decision making.

Suggested improvements. Three suggestions were made by the participants to improve the relationships among these organizations. First, increased dialogue was seen as an important way of improving the linkages among the participating organizations. The participants called for increased visits to the provinces by officials from the NDOE and the TSC. The resulting face-to-face interaction would enable operators to discuss and resolve problems before they could escalate. Regionalizing the TSC office to improve access by teachers and the PDE officials was the second suggestion made. At the time of data collection for this study, the TSC office was located only in Port Moresby, the nation's capital. It was therefore difficult for PDEs and individual teachers to access it readily. Third, analysis of the study findings seems to indicate that research and planning capacities as well as human-relations skills need improving. The education system, like the rest of the civil service, appears to lack the technical skills necessary to carry out these functions. Inservice training and education were seen as means by which the operators could acquire these skills.

Relationships Among the Major Concepts and Variables in the Study

Soon after PNG gained its political independence in 1975, the political, social, economic, and the geographical disparity of the nation led to the enactment of the Organic Law on Provincial Governments of 1978. This law provided for the devolution of political and administrative powers and the establishment of Provincial Governments. With relation to education, the Education Act of 1983 and the Teaching Service Act of 1988 superseded the Education Act of 1970 and the Teaching Service Act of 1971. These education laws clearly set out the roles and functions of the NDOE, the TSC, and the PDEs.

In an effort to succinctly present the findings of the study, a conceptual model (Figure 10.1) was designed that contains the major interorganizational linkage dimensions and associated variables. The model portrays in diagrammatic form the relationships among the contextual, linkage and outcome variables that affect the three types of organizations the NDOE, the TSC, and the PDEs in the operation of provincial high schools in Papua New Guinea.

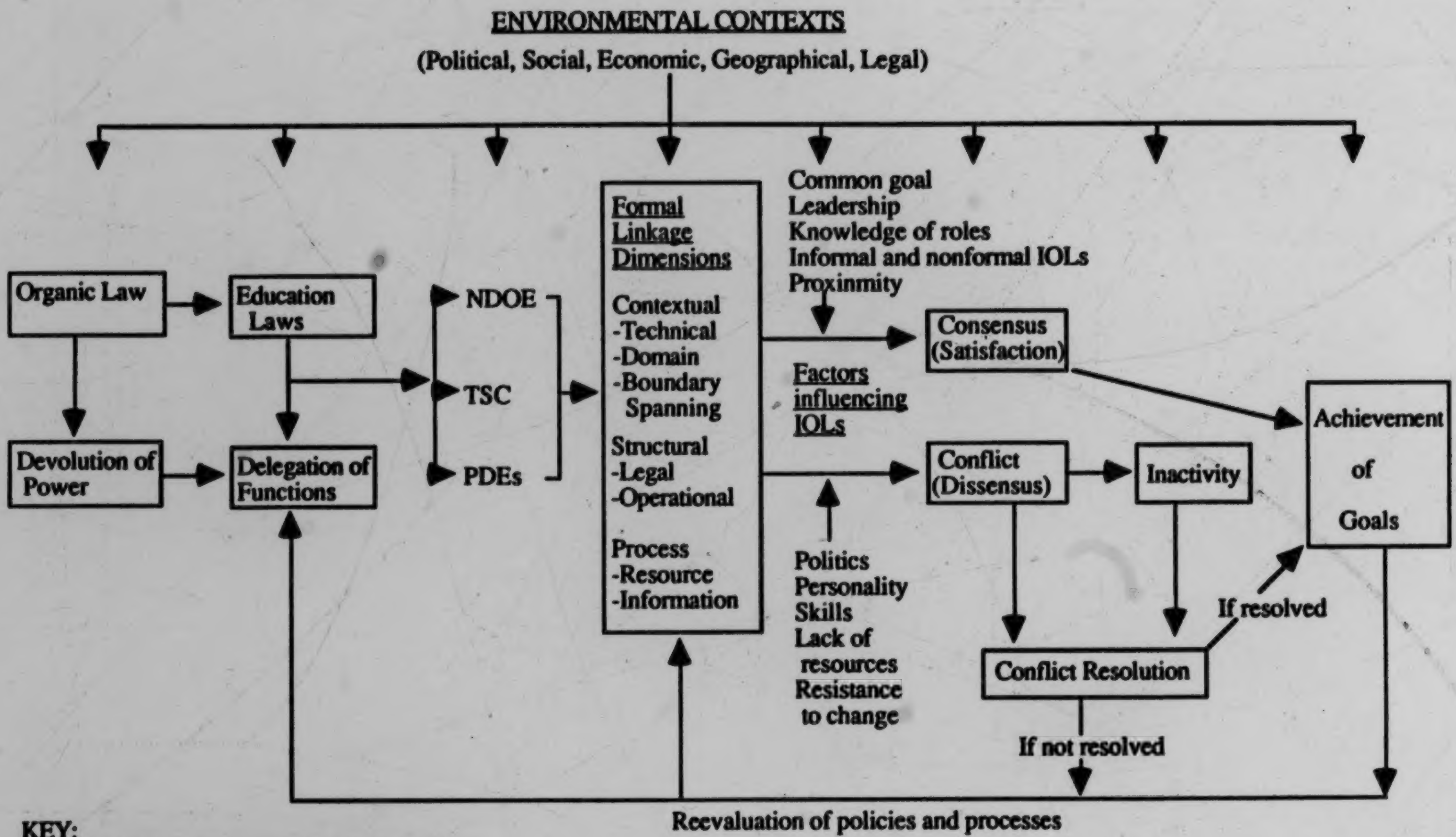
Since the member organizations are dependent on one another to accomplish their delegated functions, formal linkages exist to guide the interaction between these organizations towards the achievement of provincial high school goals, some of which are decided at the national level and others at the provincial and school levels. These formal linkages include the contextual dimensions (technical, domain consensus-dissensus, and boundary spanning), structural linkages (legal, operational), and process linkages (resource flows and information flows). The model shows that the environmental contexts in which the IOLs took place affected the effectiveness of these formal linkages. Factors such as common goal, collaborative leadership, knowledge of roles, informal and nonformal IOLs, and proximity of individual members in the participating organizations enhances consensus (and hence satisfaction) among the member organizations, consequently leading to achievement of goals. Conversely, factors such as politics, personality, lack of skills, lack of resources, and resistance to change often leads to dissensus and conflict. When conflict occurs, it slows down the efforts towards achievement of goals. The parties involved suggested that they make great effort to resolve their differences and conflicts. When conflicts were resolved it led to the achievement of goals. When conflicts were not resolved, the participants reported that it often led to reevaluation of the formal linkage policies and processes relating to the delegation of functions with the view to improving the efforts towards achievement of goals.

Implications

This study generated theoretical, practical, and research implications for scholars, practitioners, and researchers alike. Each of these types of implications is summarized below.

Theoretical Implications

This study appears to have been the first of its kind investigating interorganizational linkages within a legal framework. It has added empirical data to several gaps identified in the interorganizational linkage literature. These were related to interorganizational conflict and conflict resolution, policy development, structural arrangements, emergence of a


ENVIRONMENTAL CONTEXTS
(Political, Social, Economic, Geographical, Legal)
Organic Law
Education Laws
Devolution of Power
Delegation of Functions
NDOE
TSC
PDEs
Formal Linkage Dimensions
Contextual
-Technical
-Domain
-Boundary Spanning
Structural
-Legal
-Operational
Process
-Resource
-Information
Common goal
Leadership
Knowledge of roles
Informal and nonformal IOLs
Proxinmity
Factors influencing IOLs
Politics
Personality
Skills
Lack of resources
Resistance to change
Consensus (Satisfaction)
Conflict (Dissensus)
Inactivity
Conflict Resolution
If resolved
If not resolved
Achievement of Goals
Reevaluation of policies and processes

KEY:
NDOE = National Department of Education
TSC = Teaching Service Commission
PDEs = Provincial Divisions of Education

Figure 10.1. Conceptual model of study variables

dominant organization, and effectiveness of interorganizational relationships, as described in the following paragraphs.

Conflict and conflict resolution. In reference to the public sector interorganizational relationships, Whetten (1981) found that little research had been done in the area. He suggested:

> It would be instructive for public sector researchers to more systematically investigate the perceived sources of conflict and power between various levels of governments so that the dynamics of vertical interorganizational relations in the public and private sectors could be compared. (p. 3)

According to Whetten (1981), previous research has concentrated on improving coordination. Consequently, "researchers have consistently avoided examining the positive outcomes of competition and conflict between organizations" (p. 24). He therefore recommended that future research should examine more closely the long tradition in sociology of espousing the functional consequences of conflict for improving the validity of a system, and the equally well established tradition in political science of examining a program from the perspective of its critical constituencies.

The findings from the study suggest that in a legislatively mandated relationship where concurrent responsibility exists for the accomplishment of tasks, conflict is inevitable. Conflict is a product not only of human factors, but also of the structural arrangements that necessitate interorganizational relationships. The organizations in this study have each been given delimited powers over a certain function. Consequently, each has to depend upon the others for the accomplishment of goals. The lack of clear demarcation is a ground in itself for interorganizational conflict. Although the provisions of the laws pertaining to the operation of provincial high schools appears to be clear, the operationalization of these policies has proven to be far from easy. In certain division of roles and functions, conflict is often experienced over exactly what each organization's role is; for example, when PEBs, as the appointing authorities, make appointment to vacant positions in their provinces and expect the TSC to endorse their decisions without change. However, too often the TSC makes changes to these decisions, which angers the Provincial Assistant Secretaries of Education.

Banner and Gagne (1995), from a review of the literature, identified three ways in which intraorganizational conflict is perceived: the traditional view, the interactionist view, and the transformational view. The traditional view holds that conflict is bad and should be avoided. The interactionist view perceives conflict as functional; that is, it can be both good and bad. The transformational view, on the other hand, "argues that conflict is not, in fact, inevitable; that is there is a perspective that can be adopted that allows for the transcendence of conflict" (p. 409). The data in this study suggest that in these highly legislatively mandated, structured, and operationalized interorganizational linkages, conflict is perceived as an inevitable outcome of the delimitation of roles and functions and is therefore accepted in the modern or the interactionist view. The study found that conflicts are accepted as the normal outcome of professional interactions of the operators from the various organizations; hence efforts are made to resolve them. Positive and negative outcomes of conflicts were reported. Conflict and conflict resolution lead to organizations' reevaluating their operational policies and procedures with the view to improving clarity. The negative outcomes involved activities being delayed. Furthermore, because conflict is viewed as a normal process of interorganizational relationships, the cordial relationships that exist among different organizations remain intact while disagreeing organizations resolve their differences.

The literature has identified conflict resolution techniques applied in resolving intraorganizational conflict (e.g., Bayer, 1985; Cooze, 1990; Johns, 1992; Koch & Decker, 1993; Robbins, 1987). These strategies include working it out, compromising, collaborating, avoiding, authority solution, smoothing over, and dominating. In this study three interorganizational conflict resolution techniques were applied: mutual discussion, resolution by heads of departments (authority solution), and written communication. The use of authority solution is applied in a manner similar to that in intraorganizational conflicts. Mutual discussion of conflict calls for face-to-face interaction of the conflicting parties to seek a solution. This approach is similar to the "working it out" approach. These experiences seem to support the contention that the dynamics of interorganizational conflict are similar to those of intraorganizational conflict. One difference in the conflict resolution in the present study was the employment of written communication to continue the dialogue towards conflict resolution. Because the PDEs and the PEBs are scattered throughout the country, face-to-face discussion is not always possible. Written communication is the least expensive method of discussing and resolving conflicts.

Interorganizational policy development. Another variable included for further investigation was the "development of interorganizational policies." Intriligator (1992) reminded us that "interorganizational policies are needed to guide operations in interorganizational units and to guide the decision-making process" (p. 8). Thus, understanding how these policies are constructed can contribute to understanding the cohesiveness (or lack of it) in interorganizational relationships. The data in this study revealed that the structural arrangements for interorganizational linkage between and among the NDOE, the TSC, and PDEs are a result of the acts of the Parliament. Thus, the roles and the functions of each of these organizations and the behavior of the role incumbents were legislated, effectively leaving little room for discretion among the operators. The incorporation of roles and functions, although in many cases preventing duplication and wastage of resources, has become an obstacle in operationalizing the decision making process. For example, under the provisions of the education laws the NDOE is responsible for granting teachers the "eligibility for promotion." The PEBs are the appointing authorities that decide who should be appointed to a "promotional position." The TSC, on the other hand, decides the procedures that the PEBs must follow in making those promotion decisions. The TSC's insistence on the PEBs' compliance with the provisions of the Teaching Service Act (1988) is a case in point. Since its inception in 1971, teacher appointment procedures have always resulted in conflict between the TSC and the PEBs. This seemed to suggest that enactment of legislation can ignore the realities of the problems relating to placing teachers in provincial high schools. Consequently, when a party insists on "due process," it is possible that such behavior will lead to classrooms without teachers. From this perspective, such policy making is detrimental to the provision of education.

Structural arrangements. In differentiating some of the distinguishing characteristics of interorganizational interaction, Clark (1965) suggested three patterns of concerting influence. The first is the organizational or bureaucratic pattern. At the other extreme is that found in political arenas characterized by a formal decentralization of authority, and therefore to be understood by a theory of political influence. Between the two are patterns of confederative organization or organizational alliance,

> which converge with and become somewhat a part of political influence, in that they are the result of effort to co-ordinate autonomous agencies, to unite effort *without* the authority of formal hierarchy and employee status. They are somewhat different in that they develop away from formal political arenas and often escape the constraints of political accountability (p. 233).

Following Clark (1965), Warren (1972) described four types of inclusive context for decision making: unitary, federative, coalitional, and social-choice. He distinguished them from each other on the basis of a number of dimensions: (a) relation of units to an inclusive goal, (b) locus of inclusive decision making, (c) locus of authority, (d) structural provision for division of labor, (e) commitment to a leadership subsystem, (f) and prescribed collective orientation of units as presented in Table 10.1. Hodge and Anthony (1988) added that "it is important to realize that these contexts exist on a continuum. There can be shadings in an individual case, and it might not always be easy to type a particular relationship" (p. 212).

The results of this study suggest that public social service interorganizational arrangements resulting from an act of parliament to accomplish a common goal on a

Dimension	Unitary	Federative	Coalitional	Social Choice	Politico-Legal
Relations of units to an inclusive goal	Units organized for achievement of inclusive goals	Units with disparate goals, but some formal organization for inclusive goals	Units with disparate goals, but some informal collaboration for inclusive goals	No inclusive goals	Units legally organized for achievement of inclusive goal
Locus of inclusive decision making	At top of inclusive structure	At top of inclusive structure, subject to unit ratification	In interaction of units without a formal inclusive structure	Within units	In interaction of units within formal organization for inclusive goal
Locus of authority	At top of hierarchy of inclusive structure	Primarily at unit level	Exclusively at unit level	Exclusively at unit level	Primarily at unit level, but within the formal organization
Structural provision for division of labor	Units structured for division of labor within inclusive organization	Units structured autonomously, may agree to a division of labor, which may affect their structure	Units structured autonomously, may agree to *ad hoc* division of labor, without restructuring	No formally structured division of labor within an inclusive context	Units structured to be autonomous, but *required* to work cooperatively
Commitment to a leadership subsystem	Norms of high commitment	Norms of moderate commitment	Commitment only to unit leaders	Commitment only to unit leaders	Commitment to unit leaders
Prescribed collectivity of orientation of units	High	Moderate	Minimal	Little or none	Moderate to high

Table 10.1. Types of inclusive context
(Adapted from Warren, 1972, p. 316)

longitudinal basis do not fit into any of the categories identified by Warren (1972). At best, the interorganizational relationships reported in this study would fall into a context in which interorganizational linkages are highly regulated and operationalized. The findings of this study would suggest a *politico-legal context* as a more appropriate linkage context to describe such interorganizational relationships. The interaction pattern of the politico-legal context, as shown in Table 10.1, is characterized by formal devolution of power, and thus has to be carried out within the constraint of political and legal accountability. In comparison with the description of the contexts differentiated by Hodge and Anthony (1988, pp. 211-212), in a politico-legal context, units are legally organized for the achievement of an inclusive goal. Decision making takes place through interaction of autonomous units within the formal organization for an inclusive goal. Authority is primarily located in units within the formal organization. Units are politically autonomous, but are expected to work cooperatively, collaboratively, and in coordination to achieve the inclusive goal. Leadership commitment is primarily to the unit leader, and interorganizational interaction depends a great deal on "good will." The collectivity orientation of the units is prescribed in the legal framework that governs the interorganizational relationship.

Emergence of a dominant organization. The structures for interorganizational interaction mentioned earlier in this chapter reveal that these structural arrangements, on their own, are insufficient to link the work of the member organizations effectively. This confirms Gray's (1985) proposition that "mandate alone will not generate conditions conducive to collaboration. However, coupled with other conditions (e.g., recognition of interdependence and balance of power), mandate can provide a structural framework for ongoing regulation of the domain" (p. 929). Leadership skills and informal and nonformal relationships were found to be most important in facilitating formal interorganizational relationships in this study. Furthermore, continuing regulation of the relationship may be preceded by a dominant organization that will fill the vacuum. This dominant organization, in Gray and Hay's (1986) terms, may be one that is powerful because its operators have recognized expertise related to issues under consideration, because they control an established part of the public policy process and will affect the implementation of whatever agreements the project members may reach, or because it has the resources to support -- or oppose -- the project agreements.

This study demonstrated that the NDOE plays the dominant role in interorganizational relationships with the TSC and the PDEs. Its dominance is promoted by the strategic powers it possesses over human, physical, and nonphysical resources. The NDOE is charged with overall supervision of the development of provincial high schools in the country. Coupled with providing much of the financial and curriculum resources, the possession of greater human resources, and the cordial relationships it enjoys in its interaction with the TSC and the PDEs, it has emerged as the leading organization in this interorganizational linkage. This finding suggests that in a mandated organizational network, the organization that possesses technical and resource capacity may emerge as the dominant organization.

Effectiveness of the interorganizational linkages. Wiant, Wambrod, and Pratner (1984) claimed that the current literature pertaining to interorganizational linkages has paid little attention to effectiveness of interorganizational linkages. The review of relevant literature in the last decade seems to support the conclusions reached by Wiant, Wambrod, and Pratner (1984). In those studies that measured the concept, effectiveness was measured in term of the frequency, and intensity of the interaction (Andrews, 1978; Jeffrey, 1989; Mutema, 1982). One possible reason for neglecting effectiveness is that although interorganizational effectiveness is important, the concept has not been extensively studied because there is no agreement on what aspect of it should be studied. Following Hall (1996) and Van de Ven and Ferry (1980), this study investigated the effectiveness of the linkages in terms of frequency and satisfaction. Frequency was measured in terms of the regularity of the flow of resources and information between and among the organizations, whereas satisfaction was determined in terms of the achievement of goals. The findings of this study suggest that in a highly mandated interorganizational relationship, where individual member organizations are granted delimited roles and functions, collaborative interaction is required on a continuous basis. However, among members of the organization network studied, the frequency of interorganizational interaction is limited by the availability of financial resources. Similar to Jeffrey's (1989) findings, satisfaction of the member organizations, on the other hand, varied across pairs of organizations. It was high for some pairs (such as between the NDOE and the TSC), and low for others (such as the TSC and PDEs). The level of satisfaction appears to be influenced by the connectedness of the dyads in their relationships and in the extent of conflict resolution. That is, where a cordial relationship exist between any two organizations, mutual interaction is emphasized in conflict resolution. Conflicts are resolved through mutual discussion among the conflicting organizations. Where the relationship between a pair of organizations is strained, interaction and conflict resolution appear to take place under duress.

Practical Implications

The delimitation of roles and functions appeared to lead to conflict. This study highlighted several instances in which cooperation between certain pairs of interacting organizations was perceived to be strained. One such situation is the processes pertaining to the appointment of teachers and the perceived roles of the TSC and the PEBs. Another example involves educational policy making and its implementation. Some PDEs resist implementing national education policies. The latter difficulties have been experienced between the NDOE and the PDEs. These experiences raise the issue of power balance in interorganizational linkages. Ewanyshyn (1986) warned that "a high concentration of control at one organizational level may reduce the balance of control in the educational system, and increase resistance to change and innovation" (p. 187). These conflict situations seem to call for reassessment of the roles that each of these organizations plays in the operation of provincial high schools. In relation to the appointment of teachers, the system appears cumbersome and lengthy. The rigid procedures that all PEBs must adhere to have contributed to the nonappointment of teachers to positions. One solution to this problem is for the PEBs to assume full responsibility for appointment decisions. The TSC's function could be restricted to deciding the terms and conditions of service of teachers. It could continue to issue guidelines for the appointment process, but these would not be mandatory as now. The TSC assumes extra power by also being the arbitrator of teachers' appeals. As employer of the teachers, it is not neutral; consequently, many of its decisions have been questioned by the teachers and the PEBs. The arbitration role should ideally be played by a neutral body.

In relation to national educational policy making and implementation in PNG, resistance seems to occur because the provinces want to have a greater say in educational policy making. The current structural arrangements in regard to the operation of provincial high schools are being challenged. Thus, as Intriligator (1992) reminded us, periodic assessment of the effectiveness of partnership arrangements is necessary for mid-course corrections. Gray (1985) proposed that "effective structuring involves negotiation among all stockholders about how to regulate the domain, including negotiations about the implementation of actions and the power distribution necessary to do so. One outcome of structuring is an agreed upon allocation of power within the domain" (p. 930). In line with what the theory suggests, it appears that the intensity of the interaction between the NDOE and the PDEs probably needs to be increased in order to promote greater collaboration and cooperation. More important, educational policies have to be approved at the political level. In this case, reconvening of the meeting of the Education Ministers seems to be most important for national educational policy decisions.

This study also revealed that although flow of information from the two national organizations to the PDEs is regular, the reverse is not the case. Yet information in terms of educational statistics and innovations is important for the coordination of national educational development. Further, this study highlighted that there is a high degree of interdependence among the member organizations. This interdependence is an inevitable outcome of the educational laws. Thus, as Intriligator (1997) suggested, "The greater the need for interdependence, the more the need for a specific set of *Actors* to accomplish the collective objectivity" (p. 12). Therefore, consideration should be given to creating an interorganizational coordinating agency or unit whose sole responsibility would be to ensure the implementation of collective decisions. This unit could also be assigned the task of ensuring that information and resources reach their intended destinations. To enforce compliance by all member organizations, this unit would need to be granted power to impose penalties for noncompliance.

Finally, one of the factors contributing to strained interorganizational linkages between the TSC and the PEBs is the geographic disparity between these types of organizations. The TSC office is located only in Port Moresby, the nation's capital. This location is not conducive to face-to-face interorganizational interaction for the great majority of provinces. Gray (1985) postulated that "collaboration is positively enhanced by physical proximity of the stakeholders. Physical proximity facilitates frequency of contacts" (p. 931). In Chapter 8 of this study, it was reported that communication between the NDOE and the TSC is effective because these two organization are housed in the same building complex. The proximity of these two units promotes face-to-face dialogue on a daily basis. Consequently, there is little or no conflict between them. This finding suggests that there is a need for the TSC to have a presence in the provinces, which would provide easier access by teachers and educational authorities in the local areas. The problems of teachers could be more easily discussed and resolved before they escalated.

Implications for Research

The phenomenon of interorganizational linkages is an important topic for continued investigation. This statement is made in light of the reduction in the resources available to educational agencies, whereas the need for education, especially in the developing nations, is an increasing one. The issue of relevant and meaningful local participation is resulting in decentralization of educational powers (e.g., Nsaliwa, 1996) in developing nations. This study has generated several issues that may need further investigation. Among them are: applying qualitative methodologies in the study of interorganizational linkages, effect of nonformal relationships on interorganizational linkages, and effectiveness of interorganizational linkages.

Applying qualitative methodologies in the study of interorganizational linkages. As mentioned earlier in this chapter, this study appears to be the first of its kind in applying purely qualitative methodologies to investigate interorganizational linkages within a legal framework. The major data-collection instrument employed was the interview schedule (Appendix A). Despite the care taken in the wording of the interview questions and the need to rewrite some of them following a pilot test, the problems created by the inclusiveness of the dimensions investigated resulted in a certain amount of repetition. Thus, further testing and analysis would be in order to further improve the interview guide. One particular aspect of interorganizational linkages that is pervasive in all of the dimensions identified in the literature is conflict. In constructing interview schedules, decisions may have to be made to decide how to approach the investigation of this issue.

Effect of nonformal relationships on interorganizational linkages. In investigating informal relationships that facilitate interorganizational linkages, this study identified that certain of these informal relationships are really what Sayles (1961) called *nonformal relationships*. These are work-related linkages that are intended to accomplish a task at least cost to the participating individuals or organizations. The research of this topic should be focused on identifying the various kinds of nonformal linkages and the role they play in facilitating the effectiveness of the interorganizational relationships.

Effectiveness of interorganizational linkages. Wiant, Wambrod, and Pratner (1984) recommended continuing investigation of effectiveness of interorganizational relationships. The results of this study renew that call. In particular, this study identified human capacity as a factor in the effectiveness of interorganizational linkages. Further research is required to investigate the role that capacity plays in inhibiting or promoting effective relationship. Furthermore, Brandenburger and Nalebuff (1996) have generated the new concept of *co-opetition*. Amongst other benefits, co-opetition allows organizations to think in terms of complements. Brandenburg and Nalebuff stated:

> Thinking complements is a different way of thinking about business. It's about findings ways to make the pie bigger rather than fighting with competitors over a fixed pie. To benefit from this insight, think about how to expand the pie by developing new complements or making existing complements more affordable. (p. 14)

From an educational perspective, research should be focused on discovering how the concept of co-opetition can be applied to improve the effectiveness of the relationships between the members of an interorganizational network.

Conclusion

The research question posited for this study is restated in order to facilitate understanding of the concluding remarks that follow:

> **What interorganizational linkages exist between and among the National Department of Education, the Teaching Service Commission, and the Provincial Divisions of Education; and how effective are they in facilitating the operation of provincial high schools in Papua New Guinea?**

The interorganizational linkages in this study were initially established, through the Education Act of 1970 and the Teaching Service Act of 1971, to provide for greater participation in educational decision making by the community and to obtain resource input into education by these communities. These acts were respectively superseded by the Education Act of 1983 and the Teaching Service Act of 1988. The educational laws of 1983 and 1988 were passed to appease the political aspirations for independence by several affluent provinces. The structural arrangements generated by the education laws demand cooperation and collaboration between and among the participating organizations to provide effective coordination of efforts of the individual organizations towards the operation of provincial high schools. Despite the claims by the participants that the devolution of educational powers under the provisions of the education laws are respected by these organizations, the structural arrangements have resulted in conflicts. The presence of conflict suggests several things. First, the structural arrangements on their own are insufficient to warrant effective interorganizational linkages. Human factors have a tremendous influence on interorganizational relationships. Nonformal relationships add a new dimension to promoting effective linkages. In keeping with the idea proposed by Sayles (1961), these linkages are designed to get the job done at a minimum cost to the organizations involved. Second, even though the interorganizational relationships are tightly regulated, the current study seems to suggest that there is insufficient organization to ensure coordination and cooperation. For example, one such nonformal structure was the Senior Education Officers' Conference, which generated collective decisions toward improving the operation of provincial high schools, but its decisions were not always implemented. One possible explanation for the lack of implementation is that interorganizational linkages did not have an "overarching unit" to carry out this function.

Resource and information flows between and among these organizations were also influenced by the roles and functions that each of the participating organizations was granted under the provisions of the Education Act of 1983 and the Teaching Service Act of 1988. Resources flow mainly from the national to the provincial level. Information flow, however, varies between pairs of organizations. Communication between the NDOE and the TSC is constant, and can be described as a two-way process. There is regular flow of information from the two national organizations to the provincial bodies, but these communications are mainly one-way processes. Two-way processes are curtailed primarily, it seems, by the limited funds available to finance travel . Communication of educational information from the PDEs to the two national bodies is sporadic and subject to "good will." To some extent this study confirms that proximity promotes interconnectedness of the member organizations. It also suggests that distance and geographical disparity can hinder the smooth flow of information.

Operationally, the PDEs and the PEBs are required to provided statistical data to the NDOE for national planning purposes. However, there is no allowance in the educational laws for the NDOE to demand compliance from these provincial bodies. Once again, this finding points out the weaknesses in the existing interorganizational arrangements that do not ensure flow of information.

As mentioned earlier in this chapter and elsewhere in the thesis, the delimitation of roles and functions of each of these organizations provides a fertile environment for conflict. Role conflicts occur among these organizations over deciding educational policy priority and its implementation, as well as decisions relating to the appointment of teachers. Power conflicts arise over political and administrative autonomy. Though the provisions of the Education Act of 1983 and the Teaching Service Act of 1988 appeared clear, operationally, there were grey areas in the demarcation of roles and functions relating to teacher appointments, educational policy making, and coordination. The occurrence of conflict is perceived as a function of the professional interaction between operators in the participating organizations and therefore as inevitable. Thus, efforts are always made to resolve them through mutual discussion or referral to higher authorities. Conflict is viewed from an interactionist perspective and leads to decisions by individual organizations to improve interaction with other organizations. The data suggest that in highly structured interorganizational linkages, the operators' understanding of and respect for the division of roles and functions are most important to promote cooperation and collaboration. Lack of appreciation for the division of powers can lead to role disputes, as demonstrated in this study.

Generally, the interorganizational relationships discussed in this study are satisfactory in that interorganizational goals have been achieved, although sometimes with difficulty. The study seems to demonstrate that the effectiveness of interorganizational linkages within a politico-legal context can be affected by several factors. Among them is the common interorganizational goal that member organizations try to work toward. This study reveals that because all of these organizations have an inclusive goal, it contributes to harmonious interaction and consequently reduces the chances of conflicts. Another factor that stood out in the study was the quality of the leadership that is brought to bear on the interorganizational relationships. Given the politico-legal context within which leaders of autonomous organizations are required to interact, leadership that promotes collaboration and cooperation is necessary to enhance interorganizational linkages. As Gray (1985) proposed, "Collaboration will be enhanced by [leaders] who possess legitimate authority and appreciative skills and who can serve as reticulists to rally other stakeholders to participate" (p. 924). This conclusion calls for the appointment of qualified personnel to these leadership positions. Qualifications of such persons should include not only technical and interpersonal skills, but ideally also an understanding of interorganizational linkages problems. To conclude, for the effectiveness of interorganizational linkages to be enhanced, "partners [must] assume mutual responsibility for developing and improving intended program and services" (Intriligator, 1992, p. 1).

Reflections

In concluding this study, the researcher found it worthwhile to record his reflections on the project. In his view these reflections provide useful insights for others who may consider undertaking a similar exercise. In this section, presented first are the researcher's reflections on the research methodology employed in this study. They are followed by a discussion of the researcher's thoughts in relation to the usefulness of interorganizational theory in facilitating this study.

Reflections on the research methodology. This study investigated the interorganizational linkages within a network of two national organizations and the provincial divisions of education "linked by a specified type of relation" (Aldrich, 1979, p. 281), which was to provide provincial high school education. This study is apparently the first to employ totally qualitative methods to research "the total pattern of interrelationships among a cluster of organizations that are meshed together in a social system to attain collective . . . goals" (Van de Ven & Ferry, 1980, p. 299). This approach was selected because the review of the relevant literature revealed that much of the research on interorganizational linkages was carried out using quantitative (positivist) approaches such as employment of questionnaires only, and in a few cases a combination of questionnaires and interviews. These approaches, however, failed to come up with a general framework of analysis that could be applied in all interorganizational studies. Zeitz (1980) advanced one possible reason for this state of affairs:

> The prevailing positivist conception of science is not suitable to the reality of interorganizational relationships, [for] interorganizational relationships are characterized by tremendous variety, pervasive change and conflict, the presence of a great number of confounding variables and especially for the propensity for some organizations to socially construct their own environment. In contrast, the positive idea of science, as promulgated in many social science textbooks, . . . suggests the importance of locating stable patterns of behavior and of formulating general theories that apply regardless of particular circumstances. In particular, positivism stresses the independence and externality of the social world from the researcher. (p. 72)

Just as organizations reflect the interactions of the human beings who work in them, so do interorganizational relationships. Because interorganizational relationships are characterized by tremendous variety, this researcher assumed that qualitative approaches were more likely to produce the unique characteristics of IORs in a particular setting. The prime objective of any research is to understand the meaning of an experience and how all the parts work together to form a whole (Merriam, 1988). To understand the uniqueness of an interorganizational relationship, the researcher had to hear the experiences of the participants, observe their behavior, and read the records of their activities.

In reflecting upon the research experience and writing this thesis, the researcher maintains that using qualitative methods to study interorganizational linkages is a useful approach. As the thesis reveals, hearing from the participants and reading about their life experiences enable the researcher to determine the quantifiable and measurable dimensions of interorganizational linkages such as resources, time, and frequency of interaction, as well as the difficult-to-measure dimensions such as quality of interaction, the contributions made through personnel visitation, and the perception of conflict and its effect on interorganizational relationships. Being present at the research sites provided the researcher with an opportunity to understand the contexts of the interorganizational linkages. Thus, qualitative approaches can generate rich data that can be used to capture the varied meanings that are attached to the interorganizational linkages concept.

When the researcher and the participants are separated by distance, the question of allowing sufficient time to ensure that the meanings of the participants are accurately captured arises. The data-collection period on site in Papua New Guinea lasted for four months. Given the environment in which data were collected, it was not possible to transcribe all the interviews and return them to the participants for confirmation. To overcome this problem partially, the researcher summarized each interview and returned these summaries to the participants. Although this was perceived to be satisfactory, its usefulness cannot be equated with having frequent or full feedback on interview information provided. Thus, when using interviews as the major data collecting strategy, one must realize that distance between the researcher and the participants can have an effect on the research effort. The costs associated with great distances may inhibit the researcher's efforts to capture accurately, the "world view" of the phenomenon that is being investigated.

The experience previously described suggests that in studies like this an appropriate mixture of qualitative and quantitative methods may be best. Reliance on qualitative methods alone may be suited to situations where distance does not limit the researcher's face-to-face interaction with the participants.

Utility of the Western theory of interorganizational linkages. The literature reviewed in this study was largely from North America and Western in nature. How useful was it in facilitating this study? It is often argued that a researcher cannot take ideas from one culture and apply them to another. Proponents of this argument point out that because cultures differ, what works in one country, for example, will not work in another country that is culturally different. Although the researcher acknowledges that there is certainly truth in this statement, he points out that research methods and the findings of research undertaken in one culture can be used as the basis from which research in a given field can be undertaken in a different culture. Such was the case in this project.

The review of the literature on interorganizational linkages was useful in two ways. First, it revealed the gaps that needed to be filled. For example, the literature review highlighted that conflict and conflict resolution, and the effect of conflict on the effectiveness of interorganizational linkages have not been paid much attention. Because past researchers assumed March and Simon's (1967) contention that "many of the phenomena of intergroup conflict within organizations are almost indistinguishable from the phenomena that we might consider [as interorganizational conflict]" (p. 131) past studies ignored the importance of including conflict and conflict resolution as dimensions of investigation.. Similarly, the issue of the effectiveness of interorganizational linkages was also poorly covered in the literature reviewed. These two dimensions associated with interorganizational linkages were included in this study. The Western literature reviewed was very strong on organizations forming interorganizational relationships *voluntarily* to achieve their individual goals. It was short on examples of public service organizations forming *compulsory* interorganizational linkages as a result of government legislation. This study seems to be the first to investigate interorganizational relationships in a highly legislated and operationalized public sector setting. The theory examined in the review of the Western literature assisted the researcher in proposing a fifth context for inclusive decision making, the politico-legal, that can be used to describe the pattern of interaction within an interorganizational network.

The review of the literature also assisted the researcher in constructing a framework that guided the investigation of interorganizational linkages between and among the selected organizations with respect to the operation of provincial high schools. The argument about differences in culture, and hence the rejection of "foreign" theory, falls short when one realizes that the provision of education is a universal phenomenon. Further, concepts of organizations and interorganizational linkages are global. That is, the latter are formed for similar reasons regardless of the cultural context: resource acquisition, protection from environment, opportunity for growth, mandates, and gaining power and control. The experiences shared in the literature allowed the researcher to define a framework that guided the present study. These were useful starting blocks from which the researcher was able to focus on an uncovered part of the track.

Earlier in this final chapter the researcher suggested that additional research is needed in order to investigate those aspects of the field that have not been sufficiently covered. Indeed, the researcher adds that as resources for national development decline while the need for development continues to grow, especially in developing countries, there is a corresponding growing need for research on the interorganizational linkages that bind government agencies in those countries.

BIBLIOGRAPHY

Ackerman, L. S. (1984). The flow state: A new view of organizations and managing. In J. D. Adams (Ed.), Transforming work (pp. 114-137). Alexandria, VA: Miles River.

Aldrich, H. E. (1979). Organizations and environments. Englewood Cliffs, NJ: Prentice-Hall.

Andrews, M. (1978). Interorganizational relationships and effectiveness in a program for the preparation of allied health professionals. Unpublished doctoral dissertation, University of Alberta, Edmonton, AB.

Baki, P. (1995). Opening speech to the National Ratings Conference. Port Moresby, PNG, Department of Education.

Banner, D. K., & Gagne, T. E. (1995). Designing effective organizations: Traditional and transformational views. Thousand Oaks, CA: Sage.

Best, J. W. (1981). Research in education. Englewood Cliffs, NJ.: Prentice-Hall.

Bogdan, R. C., & Biklen, S. K. (1992). Qualitative research for education: An introduction to theory and methods. Boston, MA: Allyn and Bacon.

Borisoff, D., & Victor, D. A. (1989). Conflict management : A communication skills approach. Englewood Cliffs, NJ: Prentice-Hall.

Brandenburger, A. M., & Nalebuff, B. J. (1996). Co-opetition. New York: Doubleday.

Bossetti, B. L. (1990). CALM: A case study in curriculum implementation. Unpublished doctoral dissertation, University of Alberta, Edmonton, AB.

Bray, M. (1984). Educational planning in a decentralized system. The Papua New Guinea experience. Waigani, PNG: University of Papua New Guinea Press.

Brownlee, W. T. (1990). The effectiveness of interorganizational linkages between provincial education organizations. Unpublished doctoral dissertation, University of Alberta, Edmonton, AB.

Burrell, G., & Morgan, G. (1979). Sociological paradigms and organizational analysis: Elements of the sociology of corporate life. London: Hinemann Educational.

Cates, C. S. (1983). Collaborative arrangements that support school improvement: A synthesis of recent studies. Washington DC: National Institute of Education. ERIC Document # ED 264 653.

Clark, B. R. (1965). Interorganizational patterns in education. Administrative Science Quarterly, 10, 224-363.

Cook, K. S. (1977). Exchange and power in networks of interorganizational relations. Sociological Quarterly, 18 (1), 62-82.

Cooze, J. (1989). Viewing conflict positively. The Canadian School Executive, 9 (5), 18-20.

Daft, R. L. (1989). Organization theory and design (3rd ed.). St Paul, MN: West.

Das, H. (1990). Organization theory with Canadian applications. Toronto, ON: Sage.

Denzin, N. K. (1970). The research act: A theoretical introduction of sociological methods. Chicago, IL: Aldine.

Department of East New Britain Provincial Education Board. (1995). Minutes of Provincial Education Board Meeting #128 (1/95). Rabaul, PNG: Author.

Department of Education. (1990a). Circulars reprinted for the use of provincial high schools. Port Moresby, PNG: Author.

Department of Education. (1990b). Handbook of headmasters and headmistresses of provincial high schools. Port Moresby, PNG: Author.

Department of Education. (1991). Education sector review, volume 2: Deliberations and findings. Port Moresby, PNG: Author.

Department of Education. (1994). Papua New Guinea National Plan of Action. Port Moresby, PNG: Author.

Department of Education. (1995). Inspections review report. Port Moresby, PNG: Author.

Deutsch, M. (1973). The resolution of conflict: Constructive and destructive processes. New Haven, CT: Yale University.

Evans, C. W., & Boyd, R. (1991). The impact of inadequate funding on a school - university collaboration effort. Paper presented at the 45th annual meeting of Professors of Educational Administration, Fargo, ND.

Emery, F. (1993). Policy: appearance and reality. In K. Greene (Ed.), A systems-based approach to policymaking (pp. 175-196). Boston, MA: Kluwer Academic.

Ewanyshyn, E. L. (1986). Control over educational decisions. Unpublished doctoral dissertation, University of Alberta, Edmonton, AB.

Galaskiewicz, J. (1985). The structure of organizational networks. Social Forces, 57 (4), 1346-1364.

Germscheid, R. G. (1982). Work experience education program effectiveness and organization. Unpublished doctoral dissertation, University of Alberta, Edmonton, AB.

Government of Papua New Guinea. (1977). Organic Law on Provincial Government. Port Moresby, PNG: Government Printer.

Government of Papua New Guinea. (1983). Education Act of 1983. Port Moresby, PNG: Government Printer.

Government of Papua New Guinea. (1988). Teaching Service Act of 1988. Port Moresby, PNG: Government Printer.

Gray, B. (1985). Conditions facilitating interorganizational collaboration. Human Relations 38(10), 911-936

Gray, B., & Hay, T. M. (1986). Political limit to interorganizational consensus and change. The Journal of Applied Behavioral Science, 22 (2), 95-112.

Guba, E. G., & Lincoln, Y. S. (1981). Effective evaluation. San Francisco, CA: Jossey-Bass.

Guba, E. G., & Lincoln, Y. S. (1988). Naturalistic and rationalistic enquiry. In J. P. Keeves (Ed.), Educational research, methodology, and measurement: An international handbook (pp. 81-85). Oxford, UK: Pergamon Press.

Hall, R. H. (1986). Organizations: Structure, process and outcomes (5th ed.). Englewood Cliffs, NJ: Prentice-Hall.

Hall, R. H. (1996). Organizations: structure, process and outcomes (6th ed.). Englewood Cliffs, NJ: Prentice-Hall.

Hanson, E. M. (1991). Educational administration and organization behavior (3rd ed.). Boston, MA: Allyn and Bacon.

Hasenfeld, Y., & English, R. (1974). Human service organizations. Ann Arbor, MI: University of Michigan Press.

Hodge, B. J., & Anthony, W. P. (1988). Organization theory (3rd ed.). Boston, MA: Allyn & Bacon.

Hohomann, L. (1985). Interorganizational collaboration in continuing education: New directions for continuing education: Problems and prospects in continuing education Continuing Professional Education, 27, 75-85.

Inskip, R. (1992). Planning and facilitating interorganizational collaboration. Unpublished doctoral dissertation, University of Toronto, Toronto, ON.

Intriligator, B. (1992). Establishing interorganizational structures that facilitate successful school partnerships. Paper presented at the annual general meeting of the American Educational Research Association, San Francisco, CA.

Intriligator, B. (1997). Working together: The campus magnet school. Paper presented at the annual general meeting of the American Educational Research Association, Chicago, IL. March.

Jeffery, J. H. (1989). Linkages and effectiveness of relationships between ATA and other organizations. Unpublished doctoral dissertation, University of Alberta, Edmonton, AB.

Kennedy, N. J. S. (1984). Interorganizational relationships in three allied health joint cooperative training programs. Unpublished master's thesis, University of Alberta, Edmonton, AB.

Levine, S., & White, P. E. (1961). Exchange as a conceptual framework for the study of interorganizational relationships. Administrative Science Quarterly. 5 (1), 583-610.

Lincoln, Y. S., & Guba, E. G. (1985). Naturalistic inquiry. Beverly Hills, CA: Sage.

Lindblom, C. (1968) The policy-making process. Englewood Cliffs, NJ: Prentice-Hall.

Mann, L. M. (1982). Interorganizational linkages in a cooperative education program. Unpublished doctoral dissertation, University of Alberta, Edmonton, AB.

March, J., & Simon, H. (1958). Organizations. New York, NY: John Wiley.

Marrett, C. B. (1971). On the specifications of interorganizational dimensions. Sociology and Social Research. 56 (1). 83-99.

Marshall, S. J. (1993). Improving senior secondary schools: What can we learn from teachers' experiences of the SACE. Unpublished doctoral dissertation, University of Alberta, Edmonton, AB.

Mathison, S. (1988). Why triangulate? Educational Researcher. 17 (2), 13-17.

McDonnell, L., & Elmore, R. (1987). Getting the job done: Alternative policy instruments. Educational Evaluation and Policy Analysis. 9 (2), 133-152.

Merriam, S. B. (1988). Case study research in education: A qualitative approach. San Francisco, CA: Jossey-Bass.

Metcalf, H. C., & Urwick, L. (1957). (Eds.). Dynamic administration: The collected papers of Mary Parker Follett. London: Pitman.

Miles, M. B., & Huberman, A. M. (1994). Qualitative data analysis: An expanded sourcebook (2nd ed.). Thousand Oaks, CA: Sage.

Monge, P. R., & Eisenberg, E. M. (1987). Emerging communication networks,. In F. Jablin, L. Putnam, K. H. Roberts,., & L. W. Porter, (Eds.). Handbook of organization communication (pp. 304-342). Beverly Hills, CA: Sage.

Morgan, G. (1986). Images of organizations. Newbury Park, CA: Sage.

Morgan, G. (1997). Images of organizations. (2nd ed.). Newbury Park, CA: Sage.

Morgan, E. L., & Spearly D. H. (1984). Child care consortiums by employers: Four interorganizational issues to consider when developing a joint project. Care Project, Final Report. Austin, Texas: Austin Child Guidance and Evaluation Center. ERIC Document # ED 242 437

Mutema, A. (1981). Interorganizational linkages and the effectiveness of clinical practices in two allied health professions in Kenya. Unpublished doctoral dissertation, University of Alberta, Edmonton, AB.

Nsaliwa, C. D. (1996). Decentralization of educational decision making in Malawi. Unpublished doctoral dissertation, University of Alberta, Edmonton, AB.

Parsons, T. & Shils, E. (1962). Categories of the orientation and organization of action. In T. Parson, and E. Shils (Eds.), Towards a theory of action. (pp. 53-109) . New York, Harper and Row.

Patton, M. Q. (1980). Qualitative evaluation methods. Newbury Park, CA: Sage.

Patton, M. Q. (1990). Qualitative evaluation and research methods (2nd ed.). Newbury Park, CA: Sage.

Pennings, J. M. (1980). Interlocking directorates: origins and consequences of connections among organizations' Boards of Directors. San Francisco, CA: Jossey-Bass.

Phillips, A. (1960). A theory of interfirm organizations. Quarterly Journal of Economics, 74, 602-613.

Putnam, L. L., Phillips, N., & Chapman, P. (1996). Metaphors of communication and organization. In S. R. Clegg, C. Hardy, & W. R. Nord (Eds.), Handbook of organization studies.(pp. 375-408). London, UK: Sage.

Ratsoy, E. W. (1980). Environmental linkages and policy making in educational organizations. The Canadian Administrator, 19 (7), 1-6.

Robbins, S. P. (1974). Managing organizational conflict: A nontraditional approach. Englewood Cliffs, NJ: Prentice-Hall.

Robbins, S. P. (1987). Organization theory: structure, design, and applications (3rd ed.). Englewood Cliffs, NJ: Prentice-Hall.

Roberts, K. H., & Grabowski, M. (1996). Organizations, technology and structuring. In S. R. Clegg, C. Hardy, C, & W. R. Nord (Eds.), Handbook of organization studies. (pp. 409-423). London, UK: Sage

Rogers, D., & Whetten, D. (1979). Research needs on interagency cooperation. Ames, IA: North Central Regional Center for Rural Development. ERIC Document # ED 224 109.

Sayles, L. R. (1961). Informal work groups and formal organization. In R. Dubin, (Ed.), Human relations in administration. (2nd ed.; pp. 90-95). Englewood Cliffs, NJ: Prentice-Hall.

Smith, G. (1975). Education in Papua New Guinea. Melbourne, Australia: Melbourne University Press.

Songo, P. (1978). Power to the provinces? Education's past and present attempts at decentralization. In R. Premdas & S. Pokawin (Eds.), Decentralization: Papua New Guinea experiment: Waigani Seminar Papers. Port Moresby, PNG: University of Papua New Guinea Press.

Van de Ven, A. N., & Ferry, D. L. (1980). Measuring and assessing organizations. New York: John Wiley & Sons.

Warren, R. L. (1972). The interorganizational field as a focus for investigation. In M. B. Brinkerhoff & P. R. Kunz (Eds.), Complex organizations and their environments (pp. 307-325). Dubuque, IA: William C. Brown.

Weber, M. (1949). The methodology of the social sciences. New York, NY: Free Press.

Whetten, D. A. (1981). Interorganizational relations: A review of the field. Journal of Higher Education, 52 (1), 1-28.

Wiant, A., Wambrod, C. P., & Pratner, F. C. (1984). Linkages of vocational education and related service deliveries. Ohio State University, OH: National Center for Research in Vocational Education. ERIC Document # ED 240 267.

Witkin, B. R. (1979). Interagency planning: A case study in Murphy's law. Paper presented at the annual meeting of the International Society of Educational Planners, Kiwa Island, SC: ERIC Document # ED 231 021.

Wolcott, H. F. (1994). Transforming qualitative data: Description, analysis, and interpretation. Thousand Oaks, CA: Sage.

Yin, R. K. (1994). Case study research design and methodology (2nd ed.). Thousand Oaks, CA: Sage.

Zeitz, G. (1980). Interorganizational dialectics. Administrative Science Quarterly, 25 (1), 72-78.

APPENDICES

Appendix A

Interview Schedule

Introduction

Said by the interviewer to the participants:

In this interview I would like to ask you a few questions on the relationships between the Provincial Divisions of Education, the Teaching Service Commission, and the Department of Education, and I'd like to invite you to respond to them openly and share your views from the perspective of your office. I will guarantee you that anything you say will remain confidential. It will be used for the purpose of writing the thesis. If I need to directly quote anything you say, I will only do so if you authorize it.

1. Can you briefly describe the duties and the tasks of your position?
2. How long have been occupying this position?

Contextual Dimension

1. In what ways does your organization need the services of the other two organizations with respect to the operation of provincial high schools?
2. That persons in those organizations do you most interact with and what is the nature of interaction with these individuals?
3. With respect to the functions delegated to different organizations to participate in the operation of provincial high schools, what are the main areas of agreement between your organization and each of the other two organizations?

Structural Dimension

1. What formal relationships exist between and among these organizations with respect to the operation of provincial high schools?
2. What informal linkages exist between your organization and the other two organizations with respect to the operation of provincial high schools?
3. Can you identify any aspect of your organization's relationship with the other two that are not clearly understood?
4. What other organizations or bodies (such as the Ministers' Conference) have an impact on the decisions your organization makes with respect to the operation of provincial high schools?
4. What do you think of the way educational decisions are being made and coordinated among the various organizations involved in the operation of provincial high schools?

Process Dimension

1. What kinds of resources (money, personnel, materials, facilities) does your organization exchange with the other two organizations with respect to the operation of provincial high schools?

2. Can you identify problems that might have affected the smooth flow of resources with the other two organizations, with respect to the operation of provincial high schools?
3. In what ways do you think these resource flow processes could be improved?
4. Describe the processes that are in place to facilitate the exchange of information between your organization and each of the other two organizations with respect to the operation of provincial high schools?
5. What is the nature and frequency of information that is exchanged with the other two organizations with respect to the operation of provincial high schools?
6. Describe any problems that there are with regard to the exchange of information about the operation of provincial high schools?
7. How might these communication problems be prevented or resolved?

Effectiveness of the Linkages Among the Member Organizations

1. To what extent are the relationships that occur with the other two organizations effective?
2. Describe situations in that conflict has occurred with the other two organizations in relation to the operation of provincial high schools?
3. What in your view caused these conflicts?
4. Describe how your organization resolves, with the other two organizations, conflicts relating to the operation of provincial high schools?
5. In what way has the conflict with the other two organizations affected your organization's relationship with them?
6. Are there any other ways (than those you have already mentioned) in that you think the relationships between your organization and the other two could be improved?

Appendix B

Contact Summary Form

Interorganizational Linkages Between and Among the NDOE, TSC, and PDEs.

Visit with ______________________
(Interviewee ID #)

Site: ____________
Contact Date: ___________
Today's Date: ____________
Written by: ____________

1. What were the main themes or issues that struck me in this contact?

2 That research questions and that variables in the initial framework did the contact bear on most centrally?

3. What new hypotheses, speculations, or hunches about the field situation were suggested by the contact?

4. Where should I place most energy during the next contact, and what kinds of information should be sought?

Appendix C

List of Codes

Introduction	I	Key
I: Personal Experience	I-P. EXPERI.	I2
I: Understanding of Role	I-U. ROLE	I1

CONTEXTUAL	C	KEY
C: Services of Others	C-SERVE	C1
C: Contact Person	C-CONT	C2
C: Areas of Agreement	C-AGREE	C3
C: Areas of Disagreement	C-DISAGREE	C4

STRUCTURAL	S	KEY
S: Formal Relationships	S-FORM-REL	S1
C: Technical Relationships	C-TECH-REL	S1
S: Informal Relationships	S-INFORM-REL	S1
S: Nonformal Relationships	S-NON-FORM-REL	S1
S: Relationship not Understood	S-REL-O	S2
S: Other Organizations Impacting	S-OTH-ORG	S3
S: Process of Decision Making	S-P-DEC-MAK	S4
S: Nature of Influence	S-P-NAT-INFL	S4
S: Importance of Cooperation	S-IMPO-COOP	S4

PROCESS	P	KEY
P: Resource Exchanged	P-RES-EX	P1
P: Direction of Resource Flow	P-DIR-RES-FLO	P1
P: Improve Resource Flow	P-IMP-RES-FLO	P3
P: Improve Information Flow	P-IMP-INFO-FLO	P7
P: Nature of Information Exchanged	P-NAT-INFO-EX	P5
P: Frequency of Information Exchanged	P-INFO-EX-FREQ	P5
P: Direction of Information Flow	P-DIR-INFO-FLO	P4
P: Problems of Information Flow	P-PROB-INFO-FLO	P6
P: Vehicles of Information Flow	P-Info-Car	P4

EFFECTIVENESS	E	KEY
E: Effectiveness of Relationships	E-REL	E1
E: Problems of Resource Flow	E-PROB-RES-FLO	P2
E: Conflict Situations	E-CON-SITU	E2
E: Causes of Conflict	E-CAUS-CON	E3

E: Conflict Resolution	E-CON-RESO	E4
E: Effect of Conflict on Relationship	E-EFF-CON-REL	E5
E: Effects of Conflict on Organization	E-EFF-CON-Orgn	E5
E: Other Ways of Improving Relationship	E-OTH-IMP-REL	E6

Appendix D

Correspondence with the NDOE

January 30th, 1995

Secretary,
National Department of Education,
P.S.A. Haus,
Private Mail Bag,
Boroko,
Papua New Guinea.

Dear Sir,

Subject : Permission to Carry Out Research Among the Officials of the NDOE and the East New Britain, NCD, and Central Province Divisions Of Education

I wish to seek permission from your office to allow me to carry out research among selected officials from the NDOE as well as the East New Britain, the NCD, and the Central Province Divisions of Education. The project I wish to research is **"Interorganizational Linkages and their Effectiveness in the Operation of Provincial High Schools in Papua New Guinea"**. The details of the project which also include the research methodology are included in Appendix A. The data from this project will be used in the first instant for me to write my Doctoral Dissertation. The project has been approved by the Faculty of Graduate Studies of the University of Alberta and the Faculty of Education of UPNG.

It is anticipated that this project will be funded by UPNG and the Canadian Commonwealth Scholarship Fund. Subsequently, these is no financial obligation involved for the NDOE, although any assistance of financial or otherwise is always welcome.

The research time line is shown on Attachment C. As this is a qualitative study which depends mostly on data collection through interviews, it will be necessary for me to meet with the participants about two times. Each interview will last approximately one to one-and-one-half hours. The interview schedule is shown on Attachment B. The Data collection will take place between August and December, 1995.

I would be grateful if you could consider this application favorably.

Thank you for your time.

Yours faithfully,

Api C. Maha

DEPARTMENT OF EDUCATION

TELEPHONE: 272441
TELEGRAMS: TLX NE22193
TELEX: NE22193
FAX: 271756

P.S.A HAUS
P. O. BOX 446
WAIGANI
PAPUA NEW GUINEA

File: PR2-1-1

DATE: 27/02/95

Mr. Api C. Maha,
609H Michener Park,
Edmonton, ALBERTA,
Canada, T6H 5A1

Dear Mr. Maha,

This letter is to advise you that the Research and Evaluation Committee (REC) of the National Department of Education has approved your request to interview officers in the National Department Education. Interviewing senior officers three time for one and a half hours each may be a little too long. It would be wise to reconsider your methodology to include some structured questionnaires.

You are further advised to make individual arrangements with your subjects for the interviews as well as with the provinces.

Thank you.

TOM SETA
Executive officer, REC
For: The Chairman

25/9/95

Mr. J. Tetaga,
Secretary,
National Department of education,
PSA Haus,
WAIGANI.

Dear Mr. Tetaga,

During my meeting with you on the 12/9/95 you mentioned the coming Senior Officers' Conference in Lae, and suggested that it might be a forum which could provide useful data for my research on interorganizational linkages among and between the NDOE, the TSC, and the PDEs. I would like to accept that offer. Subsequently, I have written to seek your permission to be present at that meeting. I will meet my own expenses.

While I am at the meeting I would like to receive copies of the agenda and sit in during the meeting to observe the proceedings.

Thank you for your continuing assistance.

Sincerely,

Api C. Maha

Appendix E

Correspondence with Participants

May 27th, 1995

<<Name and Address
Supplied>>

Dear <<Name of Participant>>,

My name is Api Maha. I am a doctoral student at the University of Alberta, Edmonton, Canada. As part of the requirement for this degree, I am undertaking a research on the **Interorganizational Linkages Among and Between the National Department of Education, the Teaching Service Commission, and the Provincial Divisions of Education.** The Provinces selected for this study are East New Britain, Central, and the National Capital. National Capital District will participate in the pilot study only. It is my hope that this research will contribute to improved interaction between the member organizations.

For this project, educational officials who occupy strategic positions in the Papua New Guinea Education system will be interviewed to provide data. Because of the position you hold, I would therefore like to invite you to participate in this study. It is my view that since you are able to interact with one or all of the other organizations in the course of carrying out your duties, you have experiences that will provide rich data for this research.

Your participation will involve answering a number of questions prepared by me. It is anticipated that the initial interview will take about one and one half hours. This will be followed by a shorter meeting with me to discuss the accuracy of the record of interview. In responding to the interview questions, please feel free to express your experiences freely. Whatever you say will remain confidential. It will be used only for the purpose of writing a thesis. Any reference to your person will only be made with your full approval.

Although you are invited to participate in this study because of the position you hold, your participation in this project will be entirely voluntary. It will be up to you to decide whether or not to participate. I hope you will choose to assist me. Even if you do decide to participate, you will be free to withdraw from this exercise whenever you choose to do so.

The National Department gave its approval for me to carry out this research on February 27th, 1995. A copy of the letter is enclosed for your perusal.

This letter is my first contact with you. I will make further contact with you in early September to arrange suitable times for me to visit your office. I anticipate returning to PNG in late August. My contact in Port Moresby will be through the Staff Development Unit, University of Papua New Guinea, P. O. Box 320, University.

I thank you in anticipation and look forward to meeting you soon.

Yours sincerely,

Api C. Maha

15th August, 1995

<<Name and Address
Supplied>>

Dear <<Name of Participant>>,

Thank you for agreeing to participate in the study of **Interorganizational Linkages Between and Among the National Department of Education, the Teaching Service Commission, and the Provincial Divisions of Education.** Many of the colleagues have requested that they be informed of the specific areas that I will be asking questions about. Subsequently, I have sent the following summary to you. Please note that the order of questioning and the direction the interview will take will depend on the responses that each of you will give. Consequently, it is not possible to organize the questions before hand. The following summary, however, should give you some idea of the type of information that I will be seeking.

Ways your organization need the services of the other two organizations in the provision of secondary education;
Areas of agreements and/or disagreements in the functions each of the organization perform;
Structures that hold the various bodies together;
Which functions, if any, are not clearly understood;
Your opinion regarding the way decisions are made;
What resources are exchanged;
Problems relating to exchange of resources;
Possible solutions to these resource exchange problems;
Information exchange processes;
Nature and the frequency of exchange;
Problems of information exchange and possible solutions;
How effective are the interorganizational linkages;
Describe situations that cause conflicts;
How conflicts are resolved;
Effects of conflicts on your organization's relationship with the others.

The questions will be designed to seek your personal view of the linkages as you have experienced them through the performance of the responsibilities of your current position. As promised earlier, what you share will remain confidential with me. Your identity will not be reveal to anyone else. Where it is deemed important to quote your words, your permission will be sought.

Finally, I will contact you during the week beginning 18/9/95 to make appointments for the interview. If there are dates not suitable to you, could you please send a phone message to Staff Development Unit of UPNG.

Sincerely,

Api C. Maha

18th December, 1995

<<Name and Address
Supplied>>

Dear <<Name of Participant>>,

Thank you for participating in the study of Interorganizational Linkages Between and Among the National Department of Education, the Teaching Service Commission, and the Provincial Divisions of Education. I have now completed the data collection phase of this project, and would, therefore, like to take this opportunity to express my sincere gratitude and thanks to each one of you for your cooperation and assistance. A work of this nature can not be completed without the participation of the people who serve in the education system. Furthermore, because of the wealth of experiences that each of you accumulated through the many years in which you have served the PNG education system, your participation in providing data for this project will no doubt add to the validity and credibility of the discussions and the conclusions that are likely to be made.

I am most grateful for the time each of you gave up to spend with me, time that you no doubt had to make up for later. Though my presence was an hindrance to your daily routines, each of you willingly shared with me your thoughts and opinions on the issues that I raise. The data you have provided me is more than enough to assist me complete my doctoral thesis. I wish that I could acknowledge each one you individually, however, owing to the limitations of space, I can only acknowledge your contributions in this way. I do sincerely hope that you will accept this letter as a token appreciation for the assistance you had provided me.

Once again, thank you very much to each one of you. May I take this opportunity to wish you one and all, a very merry Christmas and a prosperous 1996.

Sincerely,

Api C. Maha

March 24th, 1997

<<Name and Address
Supplied>>

Dear <<Name of Participant>>,

Re: Request for Permission to Use Selected Quotations from Our Interview.

You will recall that sometimes in <<specific date indicated>> 1995, I conducted an interview with you on the topic "Interorganizational Linkages Between and Among the NDOE, the TSC, and the PDEs with Regard to the Operation of Provincial High Schools." This study was carried out as part of a Ph D dissertation. I have now completed writing the first draft of the report. For the final document I would like your permission to quote certain of your words by making reference to the position you held at the time of the interview.

My view is that if I relate the participants' statements to their positions, their words would provide greater credibility, than if I ascribe the statements to an anonymous person. Enclosed are excerpts taken from our interview that I wish to identify with your position. Your words are shown in quotation marks. I will not be using individuals' names in the thesis report. Thus, only your position will be linked with these quotations.

I would be grateful if you would do two things for me. First, please read through the quotations and ascertain whether they represent accurately what you said to me. You may make changes or additions as you see fit. Second, please sign the document and indicate whether you will give me authority to quote your position or otherwise. Please return the document to me in the self addressed and stamped envelope or fax it to me at (403) 492 2024 by April 30th, 1997. I may also be contacted by phone at (403) 436 5619.

Thank you very much for your continued cooperation.

Yours sincerely,

Api C. Maha

Appendix F

Curriculum Vitae

CURRICULUM VITAE

Api Cazaly Maha

ACADEMIC CREDENTIALS

1993-1997	University of Alberta	Ph. D. Candidate in Educational Administration
1988-1989	University of Alberta	M. Ed.
1986	University of Papua New Guinea	Bachelor of Education (Honors)
1983-1984	University of Papua New Guinea	Bachelor of Education (Inservice)
Feb.-Apr., 1974	International Training Institute (Australia)	Certificate in School Administration
1969-1971	Goroka Teachers College	Diploma in Secondary Teaching

AWARDS AND SCHOLARSHIPS

1993-1997	Canadian Commonwealth Scholarship
1994-1995	University of Alberta Graduate Teaching Assistantship
1993-1994	University of Alberta Graduate Research Assistantship
1988-1989	Canadian Commonwealth Scholarship
1986-1987	University of Papua New Guinea Teaching Fellowship
1983-1984	Government of Papua New Guinea Free Place Scholarship
Feb.-May 1974	Australian Government Training Scholarship
1969-1971	Territory of Papua and New Guinea Teacher Training Scholarship

WORK EXPERIENCE

1990-1993	Lecturer in Educational Administration
Oct. 1990-Aug. 1993	Dean, Faculty of Education, University of Papua New Guinea
1986-1989	Teaching Fellow, University of Papua New Guinea
1985	Principal, Popondetta Provincial High School
1984 (Dec.-Jan).	Acting Principal, Port Moresby Inservice College
1982	Principal, George Brown Provincial High School
1979 - 81	Principal, Rabaul Provincial High School
1978	Senior Subject Master, George Brown Provincial High School
1977	Deputy Principal Level 4, George Brown Provincial High School
1976	Deputy Principal Level 3, Manggai Provincial High school
1975	Social Science Subject Master, Iarowari Provincial High School
May - Dec. 1974	Social Science Subject Master, Kila Kila Provincial High School
1972 - 1973	Teacher, Sports Master, George Brown Provincial High School

OTHER PROFESSIONAL ACTIVITIES

1990 - 1993	Chairman Education Faculty Board, UPNG Member of UPNG Academic Board; Planning Committee; Staff Appointment Committee; Deans' Committee Member of PNG Secondary School Inservice Training Committee
1990	Chairman, Education Faculty Research and Publication Committee, UPNG
1982	Chairman, Gaulim Teachers' College Governing Council
1979 - 1981	Chairman, Keravat National High School Governing Council
1977 - 1978	Member of United Church Board of Education; Member of Gaulim Teachers College Governing Council
1974 - 1975	Member of PNG High Schools Social Science Syllabus Committee
1974 - 1977	Chairman of PNG High Schools Religious Education Syllabus Committee
1973	Member of United Church Board of Ministry; Member of United Church Travel and Study Committee

RESEARCH AND PUBLICATIONS

Maha, A. C. (In Press). Community participation in school administration in Papua New Guinea. *International Studies in Educational Administration.*

Maha, A. C. (1997). Governance of education in Papua New Guinea: The role of Boards of Governors. International Review of Education, 43(2/3), 179-192.

Maha, A. C. (1995). Roles and Functioning of Boards of Governors of Provincial High Schools in Papua New Guinea. In Wong, K. C., and Cheng K. M. (eds.). *Educational leadership and change: An international perspective.* Hong Kong: University of Hong Kong Press.

Maha, A. C. (1993). Participation in educational decision making: The case of Board of Governors. In Thirlwall C. & Avalos, B. (eds.). *Participation and educational change.* University of Papua New Guinea: University of Papua New Guinea Press.

Maha, A. C. (1993). The new education system for PNG, *Catalyst,* 22 (2), 7-13.

Maha, A. C. (1993). Promotion to principalship. A comparison of PNG and Western Experience. *Int. J. of Educational Development,* Vol. 13 (2), pp. 171-182.

Maha, A. C. (1993). *The work of Boards of Governors: A two province case study.* A research report. University of Papua New Guinea.

Maha, A. C. (1990). *Career development of headmasters in PNG.* Unpublished Thesis for Master of Education, Department of Educational Administration, University of Alberta.

Maha, A. C. (1986). *An investigation into alternative strategies for inservice education of teachers and discussion of their implications for the future of INSET provisions for secondary school teachers in PNG.* Unpublished Thesis for Bachelor of Education (Honors), Department of Education, University of PNG.

CONFERENCE PAPERS

Maha, A. C. (1995). *Governance Of Education In Papua New Guinea : The Role Of Boards Of Governors.* Paper presented at the American Educational Research Association, San Francisco, April.

Maha, A. C. (1992). *Roles and Functioning of Boards of Governors of Provincial High Schools in PNG.* Paper presented at the 7th Regional Conference of the Commonwealth Council for Educational Administration, Hong Kong.

Maha, A. C. (1992). *Participation in Education Decision Making: The Case of Boards of Governors.* Paper presented at the 13th Extraordinary Meeting of the Faculty of Education, Waigani, University of PNG.

Maha, A. C. (1992). *Managing Educational Change in the Decentralized context of PNG.* Paper presented at the National Department of Education, Senior Officers' Conference, Lae, PNG, July.

Maha, A. C. (1992). *Teacher Education in Papua New Guinea: The State of the Art.* Paper presented at the South Pacific Teacher Education Conference, University of the South Pacific, Fiji, June.

Maha, A. C. (1991). *Issues Affecting the Quality of Education: Inservice Training of Secondary School Teachers.* A paper prepared for the PNG Education Sector Review Group.

Maha, A. C. (1991). *The United Church Involvement in the Provision of High School Education in PNG.* Paper presented at the United Church Education Secretaries Conference, Port Moresby, September.